THE LANCET.

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PREFACE.

Records of the most striking events which have signalised the study and practice of the science of medicine in this country, as well as in foreign nations, during a period of seventeen years, are now embraced in the pages of this Journal. How various, peculiar, and opposite have been the scenes and circumstances which we have been required to witness and represent! At the commencement of our labours we had to contend against a corrupt host of arrogant monopolists, who believed that the citadel in which they had ensconced themselves was altogether impregnable, and that they would ever be enabled to withstand the most determined and powerful assaults which could be directed against them by an independent Medical Press. What was the condition, at that period, of the hospitals, the medical colleges, the medical schools, medical education and practice? The answer is to be found in the lengthened and extraordinary history which our columns have exhibited to an indignant Profession and an astonished Public.

An experience of hundreds of years had not only left the practitioners of medicine totally destitute of any well-digested, wisely-considered, statutory system of government; but the obstacles which had been created in the then existing medical corporations, appeared to be so completely insurmountable, that the mind of the profession was subdued and overawed by the seeming hopelessness and difficulty of the undertaking; hence, nothing but apathy was apparent in the ranks of the profession, at a time when great and extraordinary exertions were demanded to oppose and counteract the iniquitous proceedings of the incorporated corruptionists. The medical colleges, instead of upholding and protecting the honour and interests of the great body of the profession, had made the most strenuous efforts to *degrade* a large majority of English surgeons in the estimation of the public. The injured parties found at last an instrument of resistance, protection, and correction. But the great difficulty consisted in making the first advance towards a final victory:—

——— Facilius crescit quam inchoatur dignitas.

When, however, a few, and only a few, breaches had been opened in the ramparts of the garrison in which the corruptionists had prepared to carry on the warfare against the rights of the profession, it was instantly believed by hundreds of eager and enthusiastic individuals that the final triumph over corporate jobbing and knavery had been achieved, and that medical practitioners were free. This was a dangerous, but not a fatal error. Disappointment and inactivity were, without doubt, the first fruits of such miscalculations and mistakes; still, the seeds of discontent having been thus happily and naturally generated, a spirit of indignation succeeded, which has been unceasingly displaying new energies and powers in the noble and benevolent cause of medical reform and freedom.

The deplorable state of medical education and practice in this country, when the English Medical Reformers commenced their labours, may be best understood by reflecting on the fact, that when the first number of THE LANCET issued from the press, in October, 1823, there was not a clinical lecture delivered in the medical schools or endowed hospitals of this vast metropolis; nor did the prospectuses, which at that time were issued by the different teachers, refer to such modes of communicating information to the students as could be furnished by clinical medicine and surgery. The wards of the hospitals, containing *then*, as now, all the materials for scientific and practical instruction, had supplied no regularly recorded facts to augment the stores of medical knowledge; and, with a very few exceptions, the officers of the hospitals, who were called upon to execute important duties in those interesting receptacles of human suffering, passed through the routine of business as though they had been *automatons*, and were absolutely incapable of comprehending a single one of the thousand facts which were daily presented to their view.

Amidst all this ignorance and indolence, the arrogance of those official, self-conceited, personages, was in the highest degree offensive and insufferable. Men of character and standing in the profession, whose minds, naturally strong, had been enriched by study and experience, were frequently stigmatised by the worthless possessors of office as "SUBORDINATES," who were incapable of discharging the ordinary functions of the art of healing. Even the *reputation* arising from the successful practice of medicine was almost wholly monopolised by two or three individuals, and that measure of gratitude and admiration which ought to have been bestowed by the public on thousands of practitioners for the benefits which they had conferred on the community, were unthinkingly awarded to a very few physicians and surgeons who, although they were eminent in the profession, ought to have been only *participators*, with a vast number of their brethren, in all the useful adjuncts of renown.

Striking is the contrast between the state which we have described and that which the profession now exhibits; and the prospect, if it be not cloudless, is at least cheering and inviting to every sincere Medical Reformer.

The apathy which characterised the conduct of the profession seventeen years since, and during antecedent *centuries*, no longer exists. It has been displaced by a vivid and enthusiastic desire for the establishment of a just and wise system of medical government. The rights and privileges of a high-minded, honourable, and noble profession, are demanded, with the object of conferring advantages on the public. If there be any Medical Reformers who are discouraged in consequence of the non-accomplishment of their benevolent designs, —who imagine that all is lost because *all* is not won,—who are inclined to believe that there is no well-sustained hope of establishing a just system of medical government, because the principles of medical reform are not yet embodied in any enactment by the Legislature,—we would earnestly refer them to what has already been acquired, as the best incentive to future exertion. We would direct their attention to the steady and well-sustained movement of the profession, as it is displayed throughout the United Kingdom in the organised association of its members, in proof that the *means* of ultimately obtaining a triumph have already been secured. Had there been aught of a narrow-minded and selfish nature in the designs of Medical Reformers, a feeling of disappointment might, long ere this, have existed amongst them. But their motives have been of a national, and not of an individual character. In trying to free the science and practice of medicine from the oppression of ignorant monopolists, they have endeavoured to confer a benefit, not upon themselves but upon mankind.

Now that a change in medical government is rendered certain, suggestions and projects for the construction of a Medical-Reform Bill are becoming almost as plentiful as

hailstones in April. But we would admonish the profession against sanctioning or tolerating the complicated schemes which some have designed.

If a new law for our government is to work usefully and harmoniously, it must be *simple in its construction*. What we want is, that a legislative enactment should provide for the profession a NATIONAL MEDICAL FACULTY, which should be quickened and invigorated by a principle of REPRESENTATION, faithfully embodied and enforced. Encumber such a law with a multiplicity of details, and it would not only possess but little facility of operation, but would give birth, probably, to great difficulties, instead of affording new facilities, for the cultivation of the science of medicine. When the principle of *representation*, in the election of a senate, or a *governing* body of the profession, in a NATIONAL FACULTY OF MEDICINE, is secured, and fully and freely exercised for that purpose, the Legislature will, at the same time, have to define and set a limit to the powers which the senate, so constituted, should possess the authority of employing. In this matter the public have a right to look to the Legislature for protection against an undue exercise of power; and, assuredly, there would be no difficulty in framing a law which, whilst it should confer upon the members of the profession, generally, the right of *electing a senate* which should constitute their own governing body in a NATIONAL FACULTY OF MEDICINE, would effectually secure the community against any encroachment or improper exercise of authority on the part of the senate, that might be dictated by an *esprit du corps*.

But in submitting their views to Parliament, it must be confessed that the Medical Reformers labour under one pressing difficulty, and, in that respect, occupy a very unfavourable position. In 1833, a Select Committee of the House of Commons was appointed for the purpose of inquiring into the state of medical education and practice. The evidence elicited before that Committee, exhibited an odious and most hideous picture of monopoly, misgovernment, avarice, and injustice. "What, then!" it may be asked, "Can we trust the medical body with the management of its own affairs? Ought the "Legislature to bestow new powers on the members of a profession which has thus acted?" It is to be feared that many persons would be disposed to answer this question in the negative. But how unjust would it be to infer, from the proceedings of some of the worst and most obnoxious self-perpetuating monopolies that ever existed, what would be the conduct of a governing body that must be elected by *the unshackled choice of the whole profession*, and removable, wholly or in part, once in every twelve months? Is it fair or just to imagine that there *could* be any resemblance between the conduct of a governing assembly *so constituted*, and the uniform career of sordid, corrupt, and irresponsible monopolists?

We hold, then, that the great body of the profession should continue to contend, and lustily too, for the RIGHT of the principle of SELF-GOVERNMENT, by means of a pure and efficient system of representation in the controlling authority. The conduct of the vile corruptionists ought not, and must not, be employed as a means of inflicting permanent injury and degradation on the profession; and should the Legislature allow the atrocities of the medical corporations, imperfectly and foully constituted as they were, to be the cause of introducing niggardly and unjust restraints into an elective system of medical government, it will reflect on the character and discrimination of Parliament a permanent and just disgrace.

In the hope of rendering this Journal a perfect vehicle of the life, spirit, activity, and energies which may characterise the practice of medicine and surgery in the year 1840-41, we shall adopt a somewhat novel mode of proceeding, which we have reason to believe will enable us to be completely successful in carrying our intentions into effect.

ACCOUNT OF THE

HOSPITALS AND SCHOOLS OF MEDICINE IN LONDON;

For the Session of 1840-41, commencing October 1, 1840.

In giving an account of the Hospitals and Medical Schools, and of the Collegiate and other Regulations, which are open and in force for the newly-commencing Session, we shall follow the plan of former years. The position of the hospital and the theatre of anatomy which the student may attend, must determine all other arrangements in London, with few exceptions. His comfort and the economy of his time, are materially involved in his keeping to their neighbourhood.

UNIVERSITY OF LONDON.

ABSTRACT OF REGULATIONS FOR THE DEGREE OF BACHELOR OF MEDICINE.

Candidates are required—

To have been engaged during four years in their professional studies at one or more of the Institutions or Schools recognised by the University.

To have spent one year at least, of the four, in one or more of the recognised Institutions or Schools in the United Kingdom.

To pass two Examinations.

For the First Examination, which takes place once a-year, and commences on the first Monday in July, the Candidate is required to produce certificates—

Of having completed his nineteenth year.

Of having taken a Degree in Arts in the University or in a University the Degrees granted by which are recognised by the Senate of the University; or of having passed the Matriculation Examination.

Of having been a Student during two years at one or more of the Medical Institutions or Schools recognised by the University, subsequently to having taken a Degree in Arts, or passed the Examination.

Of having attended a course of lectures on each of four of the subjects in the following list:—

Descriptive and Surgical Anatomy; General Anatomy and Physiology; Comparative Anatomy; Pathological Anatomy; Chemistry; Botany; Materia Medica and Pharmacy; General Pathology; General Therapeutics; Forensic Medicine; Hygiene; Midwifery and Diseases peculiar to Women and Infants; Surgery; Medicine.

Of having dissected during nine months.

Of having attended a course of Practical Chemistry.

Of having attended a Practical Pharmacy during a sufficient length of time to enable him to acquire a practical knowledge in the preparation of medicines.

The fee for the Examination is £5.

Candidates to be examined in the following subjects:—

Anatomy; Physiology; Chemistry; Structural and Physiological Botany; Materia Medica and Pharmacy.

Anatomy and Physiology, by *viva voce*, and Demonstration from Preparations.

Chemistry, Materia Medica, and Pharmacy, by *viva voce*, and Demonstrations from Specimens.

The Second Examination takes place once a-year, and commences on the third Monday in July.

No Candidate is admitted to this Examination within two academical years of the time of his passing the first Examination, nor unless he produces certificates—

Of having passed the first Examination.

Of having, subsequently to having passed the first Examination, attended a course of lectures on each of two of the subjects comprehended in the list, and for which the Candidate had not presented certificates at the first Examination.

Of having, subsequently to having passed the first Examination, dissected during six months.

Of having conducted at least six labours.

Of having attended the medical practice of a recognised hospital, or hospitals, during twelve months, and lectures on Clinical Surgery.

Of having attended the surgical practice of a recognised hospital, or hospitals, during other twelve months, and lectures on Clinical Medicine.

Of having, subsequently to the completion of his attendance on Surgical and Medical Hospital Practice, attended to Practical Medicine in a recognised hospital, infirmary, or dispensary, during six months.

The fee for this Examination, £5.

Candidates to be examined in the following subjects:—

Physiology; General Pathology; General Therapeutics; Hygiene; Surgery; Medicine; Midwifery; Forensic Medicine.

ABSTRACT OF

REGULATIONS OF APOTHECARIES' HALL.

(*The Hall is situated in Union-street, Blackfriars.*)

The Examiners at this Institution require candidates for examination for the licence of the Company, to bring to the Board (besides indentures of apprenticeship) certificates of having paid money for attendance on lectures, dissections, and medical practice, as follows:—

Students whose attendance on lectures shall commence, or has commenced, on or after the 1st October, 1835, will be required to produce certificates of having attended, during three Winter and two Summer Sessions, lectures in the following order, and medical practice from the commencement of the second to the termination of the third Winter Session.

(The Winter Medical Session is to be understood as commencing on the 1st of October, and terminating in the middle of April, with a recess of fourteen days at Christmas; the Summer Session as commencing on the 1st of May, and ending on the 31st of July.)

First Winter Session.

Chemistry.
Anatomy and Physiology.
Anatomical Demonstrations.
Materia Medica and Therapeutics.

Second Winter Session.

Anatomy and Physiology.
Anatomical Demonstrations.
Dissections.
Principles and Practice of Medicine.
Midwifery.
Medical practice of an hospital.

First Summer Session.

Botany; and such other branches of study as may improve the student's general education.

Second Summer Session.

Botany, if not attended during the first Summer Session.
Forensic Medicine.
Midwifery, with attendance on cases.
Medical practice of an hospital.

Third Winter Session.

Dissections.

Principles and Practice of Medicine.

Midwifery, with cases, if two courses have not already been attended.
Medical practice of an hospital or dispensary.

The student is required to attend the medical practice of a recognised hospital, from the commencement of the Second Winter to the termination of the Second Summer Session, and from that time to the end of the Third Winter Session, at an hospital or recognised dispensary. Midwifery, two courses of sixty lectures each, in separate Sessions, and after the first Summer Session.

REGISTRATION.

A book is kept at the Hall of the Society for the registration, at stated times, of the names of students, and of the lectures, hospitals, and dispensaries they attend.

All students in London are required to appear personally, and to register the several

classes for which they have taken tickets; and those only will be considered to have complied with the regulations of the Court whose names and classes in the register correspond with the testimonials of the teachers.

The book will be open for the registration of tickets authorising the attendance of students on lectures and medical practice, in the months of October and May; and for the registration of certificates of having *duly attended* such lectures or medical practice, in the months of April and August. Due notice of the days and hours of registration will be given from time to time.

PRELIMINARY EXAMINATION.

Students may undergo their Latin examination at any time after their first registration, except during the months of August and September. A book is opened at the beadle's office at the Hall, for the entry of the names of those gentlemen who are desirous of undergoing this examination, to which twenty will be admitted on each successive Saturday, provided there are as many names on the list; when less than twenty names are on the list, no examination will take place. Candidates must attend at half-past three o'clock, and those who fail to pass this examination satisfactorily, will not be readmitted until they appear for their general examination.

EXAMINATION.

The examination of the candidate for a certificate of qualification to practise as an apothecary, will be as follows:—

In translating portions of the first four books of Celsus de Medicinâ, and of the first twenty-three chapters of "Gregory's Conspectus Medicinæ Theoreticæ."

In Physicians' Prescriptions, and the Pharmacopœia Londinensis;

In Chemistry;

In Materia Medica and Therapeutics;

In Botany;

In Anatomy and Physiology;

In the Principles and Practice of Medicine. This branch of the examination embraces an inquiry into the pregnant and puerperal states; and also into the diseases of children.

By the 22d section of the Act of Parliament, no rejected candidate for a certificate to practise as an apothecary, can be re-examined *until the expiration of six months* from his former examination.

ABSTRACT OF THE REGULATIONS OF THE

ROYAL COLLEGE OF SURGEONS IN LONDON.

(The College is situated in Lincoln's-Inn-Fields.)

After the termination of the Session 1839-1840,

Candidates will be required to bring proof

1. Of being not less than twenty-one years of age.
2. Of having been engaged in the acquirement of professional knowledge for not less than five years, three of which shall have been passed in a recognised school or schools of Surgery.
3. Of having studied Anatomy and Physiology, by attendance on Lectures and Demonstrations, and by Dissections, during two Anatomical Seasons.*

   * An Anatomical Season is understood to extend from October to April inclusive, and to comprise at least 140 Lectures on Anatomy and Physiology, occupying not less than one hour each, given on separate days; and at least 100 Demonstrations of the like duration, given in a similar manner; exclusive of Dissections, of which distinct Certificates are required.

4. Of having attended at least two courses of Lectures on Surgery, delivered in two distinct periods or Winter Seasons of six months, each course to comprise not less than 60 Lectures.
5. Of having attended Lectures on the Practice of Physic and on Chemistry during six winter months, comprising not less than 70 Lectures respectively; one course on Materia Medica, with Medical Botany, during six months, and on; on Midwifery during six months, each comprising not less than 60 Lectures, and, at least, 25 Lectures on Medical Jurisprudence.

   Certificates of attendance on these Lectures during the Summer Season will be received, provided they are equally divided over a period of four months.
6. Of having attended, during twenty one months, the surgical practice of a recognised Hospital in London, Dublin, Edinburgh, Glasgow, or Aberdeen; or

for twelve months in any one of such Hospitals, and twelve months in any recognised provincial Hospital.

7. Of having attended the Medical Practice of an Hospital or Dispensary during six months.

N. B.—Certificates will not be received, in future, on more than one branch of science from one and the same Lecturer :—but Anatomy and Physiology,—Demonstrations and Dissections,—Materia Medica and Botany,—will be respectively considered as one branch of science.

ORDER OF ATTENDANCE ON LECTURES, &c.

FOR THE OBSERVANCE OF THOSE WHO

INTEND TO PASS BOTH THE HALL AND THE COLLEGE.

The following scheme indicates the "order of study" to be observed in complying at one and the same time with the regulations of both the Apothecaries' Society and the College of Surgeons.

First Winter Session.

Chemistry.
Anatomy.
Physiology.
Anatomical demonstrations in the dissecting-rooms.
Materia medica and therapeutics.*
Principles and practice of surgery.

First Summer Session.

Botany.
Surgical practice of an hospital.

Second Winter Session.

Anatomy.
Physiology.
Anatomical demonstrations in the dissecting-rooms.
Dissections.
Midwifery and diseases of women and children.*
Principles and practice of medicine.
Principles and practice of surgery.
Medical and surgical practice of an hospital.

Second Summer Session.

Botany, if not attended during the first Summer Session.
Forensic medicine.
Practical midwifery.
Medical and surgical practice of an hospital.

Third Winter Session.

Dissections.
Midwifery and diseases of women and children.
Principles and practice of medicine.
Medical practice of an hospital or dispensary.

* In our list of schools the words "materia medica" are designed to indicate also *therapeutics;* and the word "midwifery" is intended to include *diseases of women and children.*

BY-LAWS AND REGULATIONS REGARDING MEDICAL EDUCATION

AT THE

APOTHECARIES' HALL, DUBLIN.

Every candidate must undergo two separate examinations, one for "the certificate of apprentice," the other for "the licence to practise." No candidate seeking to be examined for the certificate to be apprenticed to an apothecary will be admitted to such examination until he has attained the age of fifteen years.

The examination will consist in translating and parsing the following books, viz. :—Cæsar's Commentaries, the works of Sallust, the First Six Books of the Eneid of Virgil, the Satires and Epistles of Horace, the Greek Testament, the Dialogues of Lucian, and the First Four Books of Homer's Iliad.

Every candidate for "the licence to practise" as an apothecary must lay before the Court the following documents :—

1. "The certificate of apprentice" obtained from the Court.

2. His indenture of apprenticeship, enrolled according to Act of Parliament, with a certificate signed by the Licentiate to whom he has been indented, that he has fulfilled the period of apprenticeship required by the Act.

3. Certificates duly signed that he has diligently attended at least one course of lectures on each of the following subjects delivered at the School of the Apothecaries' Hall, or at some other school of medicine recognised by the Court.

The order of study here laid down is recommended for the guidance of students.

Chemistry, Anatomy and physiology, } During six months.
Practical chemistry, Botany, } Three months.
Materia medica, Demonstrations and dissections, Theory and practice of medicine, Surgery, Midwifery and the diseases of women and children, } Six months.
Forensic medicine, three months.

Also a certificate of six months' attendance on the entire practice of a medico-chirurgical hospital recognised by the Court, containing at least 50 beds, and where clinical instruction is regularly given.

The examination for the licence to practise as an apothecary will be as follows:—

In translating and explaining the processes in the Pharmacopœia and extemporaneous prescriptions.
In chemistry and general physics.
In materia medica and therapeutics.
In natural history and medical botany.
In anatomy and physiology.
In medicine, midwifery, and toxicology.

According to the Act a rejected candidate cannot be readmitted for examination until the expiration of six months.

LONDON HOSPITAL,

Whitechapel-road.

SURGEONS.—Mr. Andrews, Mr. John Scott, and Mr. Luke.
PHYSICIANS.—Dr. Frampton, Dr. Billing, and Dr. Gordon.
ASSISTANT SURGEONS.—Mr. Hamilton, Mr. Adams, and Mr. Curling.
ASSISTANT PHYSICIANS.—Dr. Cobb, Dr. A. Frampton, and Dr. Little.

TERMS OF HOSPITAL PRACTICE.

Medical Practice.		*Surgical Practice.*	
Eighteen months	10 guineas.	Twelve months	20 guineas.
Perpetual	20 guineas.	Ditto, as dressing-pupil	30 guineas.
Apothecary's fee	1 guinea.	Six months, ditto	20 guineas.

Clinical Lectures; by Drs. Gordon and Frampton, Messrs. Scott and Luke.—Lectures on Morbid Anatomy; by Mr. Curling.

Times of Attendance of the Medical Officers.

Mr. Andrews, Mondays and Thursdays.
Mr. Scott, Tuesdays and Fridays.
Mr. Luke, Wednesdays and Saturdays.
Dr. Frampton, Mondays and Thursdays.
Dr. Billing, Wednesdays and Fridays.
Dr. Gordon, Wednesdays and Saturdays.
All at 12 o'clock.

In-patients are admitted on Tuesdays, at 11 o'clock; the out-patients are seen daily. The Assistant Surgeons attend—Mr. Hamilton, on Tuesdays and Fridays; Mr. Adams, on Mondays and Thursdays; Mr. Curling, on Wednesdays and Saturdays.

LONDON HOSPITAL SCHOOL.

Anatomy, Physiology, and operations of Surgery; by Messrs. Luke, Hamilton, and Adams, daily, at half-past 2, except Saturdays.

One session	£6	6	0
Unlimited	10	10	0

Anatomical Demonstrations and Dissections; by Mr. Adams, daily, at a quarter past 11.

One session	£6	6	0
Unlimited	10	10	0

Surgery; by Mr. Scott, on Mondays, Wednesdays, and Fridays, at half-past 3.

One session	£3	3	0
Two courses, or unlimited	5	5	0

Medicine; by Drs. Cobb and Little, on Mondays, Tuesdays, Thursdays, and Fridays, at half-past 8, A. M.

One session	£4	4	0
Unlimited	7	7	0

Materia Medica; by Mr. Pereira, on Tuesdays, Thursdays, and Saturdays, at half-past 3.

One session	£4	4	0
Unlimited	5	5	0

Midwifery; by Dr. F. H. Ramsbotham, on Tuesdays, Thursdays, and Saturdays, at 10, A.M.

One session	£4 4 0
Unlimited	7 7 0

Chemistry; by Mr. Pereira, on Mondays, Wednesdays, and Fridays, at 10, A.M.

One course, or unlimited	£7 7 0

Botany; by Mr. Quekett, daily, at half-past 3, in the Summer.

One session	£3 3 0
Unlimited	4 4 0

Forensic Medicine; by Drs. Ramsbotham and Frampton, in the Summer, daily, at half-past 2.

One course	£3 3 0
Unlimited	4 4 0

Pathological Anatomy; in the Summer, by Mr. Curling.

One course	£2 2 0
Two courses	3 3 0

Comparative Anatomy and Physiology; in the Summer, daily, by Dr. Little.

One course	£2 2 0

Dental Anatomy, with Diseases of Teeth; by Mr. Craigie.

General fee for attendance on all the above Lectures, qualifying for Examination at the College and Hall, £50.

GUY'S HOSPITAL, SOUTHWARK.

SURGEONS.—Mr. Key, Mr. Morgan, and Mr. B. Cooper.
PHYSICIANS.—Dr. Bright, Dr. Addison, and Dr. Babington.

Surgical Practice.

Six months	£20 0 0	Twenty-one months	£26 6 0
A second entry, within two months	6 11 0	Surgeons' dresser, six months	32 2 0
		Ditto, one year	51 2 0

Medical Practice.

Perpetual	£24 4 0	Eighteen months	£15 15 0

Times of Attendance of the Medical Officers.

Mr. Key, Mondays and Thursdays.
Mr. Morgan, Wednesdays and Saturdays.
Mr. B. Cooper, Tuesdays and Fridays.
Mr. Callaway, daily.
Dr. Bright, Mondays and Fridays.
Dr. Addison, Tuesdays and Saturdays.
Dr. Babington, Mondays and Thursdays.
The Physicians all at half-past 12.

Patients taken in at 10, on Wednesdays; Surgeons' out-patients on Thursdays, at 11; Physicians' out-patients on Friday, at 11.

The Eye Infirmary is attended by Mr. Morgan, on Mondays and Fridays, at 11. Surgical clinical lectures and instructions, it is said, will be given.

The clinical wards will open the first week in November, when clinical lectures will be given by the physicians. A Lying-in Charity is attached to the hospital. Morbid anatomy demonstrations at one o'clock.

GUY'S SCHOOL.

Anatomy and Physiology; by Messrs. B. Cooper and Cock, daily, at 2.

One course of six months	£5 5 0
Perpetual	10 10 0

Demonstrations and Dissections; by Messrs. Cock and Hilton, daily, at half-past 11.

One course	£4 4 0
Perpetual	10 10 0

Surgery; by Messrs. Key and Morgan, on Mondays, Wednesdays, and Fridays, at 8, P.M.

Entire session	£3 3 0
Perpetual	5 5 0

Medicine; by Drs. Bright and Addison, on Mondays, Wednesdays, and Fridays, at half-past 3.

One course	£4 4 0
Two courses	6 6 0
Perpetual	8 8 0

Materia Medica; by Dr. Addison, on Tuesdays, Thursdays, and Saturdays, at half-past 3.

One course	£3 3 0
Perpetual	4 4 0

Midwifery; by Dr. Ashwell, daily, at half-past 8, A.M.

One course	£3 3 0
Two courses	5 5 0
Perpetual	6 6 0

Chemistry; by Messrs. Aikin and Taylor, on Tuesdays, Thursdays, and Saturdays, at 10, A.M.

One course	£4 4 0
Two courses	6 6 0
Perpetual	8 8 0
A course of practical chemistry	2 2 0

Botany; by Messrs. Johnson and Bird, on Tuesdays, Thursdays, and Fridays, at 12.

Perpetual	£3 3 0

Medical Jurisprudence; Mr. Taylor, on Mondays and Fridays, at 10.

One course	£3 3 0
Perpetual	4 4 0
Practical Toxicology	1 1 0
Lectures on the Teeth; by Mr. Bell: Perpetual	2 2 0

(Gratuitous to the Anatomy Pupils.)

Comparative Anatomy; by Mr. T. W. King, on Mondays and Wednesdays, at a quarter to 7.

Perpetual	£2 2 0

Eye Infirmary; Mr. Morgan, Mondays and Fridays, at half-past 12.

ST. THOMAS'S HOSPITAL, SOUTHWARK.

SURGEONS.—Mr. Travers, Mr. Green, and Mr. Tyrrell.
PHYSICIANS.—Dr. Williams, Dr. Burton, and Dr. Lister.

Surgical Practice.

Surgeons' Pupil, nine months	£20 0 0
Twenty-one months	26 6 0

Medical Practice.

One year and a half	£15 15 0
Two years	24 3 0
Dresser, six months	32 12 0
— one year	51 2 0

Times of Attendance of the Medical Officers.

Mr. Travers, Tuesdays and Fridays, at 9.
Mr. Green, Wednesdays and Saturdays, at 11.
Mr. Tyrrell, Mondays and Thursdays, at 9.
Mr. South sees the out-patients on Mondays and Wednesdays, at 9.
Dr. Williams, Mondays and Thursdays.
Dr. Burton, Tuesdays and Fridays.
Dr. Lister, Wednesdays and Saturdays.
All at one o'clock.
Dr. Barker sees out-patients Tues. & Thurs.

Operations performed on Fridays.

Clinical lectures to the dressers' and surgeons' pupils, by Mr. Travers, Mr. Green, Mr. Tyrrell, and Mr. South.

Clinical lectures to the physicians' pupils, by Dr. Williams, Dr. Burton, and Dr. Lister.

The admission-day for patients is Tuesday, at 10 o'clock precisely. Accidents and cases of emergency received at all hours.

ST. THOMAS'S SCHOOL.

Anatomy and Physiology; by Mr. Mackmurdo, Mr. Travers, and Mr. Clark, daily, at half-past 2.
One session.....£5 5 0
Unlimited.....10 10 0

Dissections & Demonstrations; by Messrs. Tomkins, Dixon, and Trew, daily, at 10.
Unlimited £5 5 0

Surgery; by Messrs. Tyrrell and South, on Mondays, Wednesdays, and Fridays, at 8, P.M.
Single course £3 3 0
Unlimited..... 5 5 0

Medicine; by Dr. Williams, on Mondays, Tuesdays, Thursdays, and Fridays, at 12.
Unlimited £6 6 0

Materia Medica; by Dr. Burton, on Mondays, Wednesdays, Thursdays, and Fridays, at 4. Unlimited attendance....£4 4 0

Midwifery; by Dr. Cape, on Mondays, at 11; Wednesdays and Saturdays, at 12.
First course.....£3 3 0
Second course 2 2 0
Unlimited..... 6 6 0

Chemistry; by Dr. Leeson, on Tuesdays, Thursdays, and Saturdays, at 11.
One session.....£6 6 0
Unlimited..... 8 8 0

Botany; by Mr. Cohen, in the Summer.
Single course £3 3 0
Unlimited..... 4 4 0

Medical Jurisprudence; by Drs. Lister and Barker, in the Summer.
Single course £3 3 0
Unlimited..... 4 4 0

Physiology and Comparative Anatomy; by Mr. Solly.

Anatomy, Physiology, and Diseases of the Teeth; by Mr. Saunders.

Lectures on Morbid Anatomy; by Dr. Barker, on Tuesdays and Saturdays, at a quarter before 4. Unlimited £2 2 0

GRAINGER'S SCHOOL,
Webb-street, Maze Pond, Southwark.

Anatomy and Physiology; by Mr. Grainger, daily, at half-past 2.
One session.....£5 5 0
Perpetual.....10 10 0

Demonstrations and Practical Anatomy; by Messrs. Barron, Appleton, and Jones, daily, except Saturdays, at a quarter-past 11.
One session.....£3 3 0
Perpetual..... 5 5 0

Surgery; by Mr. Pilcher, on Tuesdays, Wednesdays, Thursdays, and Fridays, at 8, P.M.
One session.....£3 3 0
Perpetual..... 5 5 0

Medicine; by Dr. J. R. Bennett, on Mondays, Wednesdays, and Fridays, at a quarter to 4, P.M.
One session.....£4 4 0
Perpetual..... 6 6 0

Materia Medica; by Dr. Wilks, on Tuesdays, Thursdays, and Saturdays, at a quarter to 4.
One session.....£3 3 0
Perpetual..... 4 4 0

Midwifery; by Dr. Reid, on Mondays, Wednesdays, and Fridays, at a quarter to 10, A.M.
One session.....£3 3 0
Two sessions..... 5 5 0
Perpetual..... 6 6 0

Chemistry; by Mr. Cooper, on Tuesdays, Thursdays, and Saturdays, at a quarter to 10, A.M.
One session.....£5 5 0
Perpetual..... 6 6 0

Botany; by Mr. Daniel Cooper, in the Summer.
One course £2 2 0
Perpetual..... 3 3 0

Medical Jurisprudence; by Dr. S. Smith and Mr. Cooper, in the Summer.

ST. BARTHOLOMEW'S HOSPITAL, SMITHFIELD.

SURGEONS.—Mr. Vincent, Mr. Lawrence, and Mr. Stanley.
PHYSICIANS.—Dr. Hue, Dr. Latham, and Dr. Roupell.
ASSISTANT SURGEONS.—Messrs. Lloyd, Skey, and Wormald.
ASSISTANT PHYSICIANS.—Drs. Burrows, Farre, and Jeaffreson.

Surgical Practice.				*Medical Practice.*			
Six months	£18	18	0	Nine months	£12	12	0
Twelve months	26	5	0	Eighteen months	15	15	0
Dresser, 6 months	37	16	0	Unlimited	31	10	0
Ditto, 12 months	52	10	0				

Times of Attendance of the Medical Officers.

Mr. Vincent, Tuesdays, Thursdays, and Saturdays.
Mr. Lawrence, Mondays, Wednesdays, and Fridays.
Mr. Stanley, Tuesdays and Fridays.
All at half-past 12.

Dr. Hue, Mondays, Thursdays, and Saturdays, at half-past 11.
Dr. Latham, Mondays, Tuesdays, and Fridays, at half-past 8.
Dr. Roupell, Mondays, Wednesdays, and Fridays, at half-past 12.

One of the assistant physicians attends daily (Sundays excepted) between the hours of 11 and 2, at the physicians' out-patients' room, to prescribe for the medical out-patients, and casualty cases.

Inspections of morbid anatomy in the pathological theatre, at 11 o'clock, by Mr. Wormald and Mr. Paget.

Clinical lectures weekly in the theatre, during the Summer, by Dr. Roupell, Mr. Lawrence, and Mr. Stanley.

ST. BARTHOLOMEW'S SCHOOL.

Anatomy and Physiology; by Mr. Stanley, daily, at half-past 2.

Half session	£5	5	0
One session	9	9	0
Unlimited	10	10	0

Demonstrations and Dissections; by Messrs. Wormald and M'Whinnie, daily, at 9, A.M.

Half session	£3	3	0
One session	6	6	0
Unlimited	10	10	0

Surgery; by Mr. William Lawrence, on Mondays, Wednesdays, and Fridays, at 7.

One session	£5	5	0
Unlimited	7	7	0

Medicine; by Drs. Latham and Burrows, on Mondays, Tuesdays, Thursdays, and Fridays, at a quarter to 4.

One session	£5	5	0
Unlimited	7	7	0

Materia Medica; by Dr. Roupell, on Tuesdays, Thursdays, and Saturdays, at 10, A.M.

One session	£5	5	0
Unlimited	7	7	0

Midwifery; by Dr. Rigby, on Mondays, Wednesdays, and Fridays, at 6, P.M.

One session	£3	3	0
Unlimited	5	5	0

Chemistry; by Messrs. Brande and Griffiths, on Mondays, Wednesdays, and Fridays, at 10, A.M.

Half session	£4	4	0
One session	6	6	0
Unlimited	8	8	0

Botany; by Dr. Frederic Farre, in the Summer.

One course	£3	3	0
Second course	2	2	0
Unlimited	4	4	0

Medical Jurisprudence; by Dr. Arthur Farre, in the Summer.

One course	£3	3	0
Unlimited	4	4	0

Comparative Anatomy; by Mr. M'Whinnie, £1 1s the course.

Natural Philosophy; by Mr. Griffiths.

ALDERSGATE-STREET SCHOOL,

Aldersgate-street.

Anatomy and Physiology; by Mr. Skey, daily, at half-past 2.

Single course	£3	3	0
Two courses	5	5	0
Unlimited	8	8	0

Demonstrations, with Dissections; by Messrs. Skey and White, daily, at 9, A.M.

Single course	£3	3	0
Two courses	5	5	0
Unlimited	6	6	0

Unlimited attendance on the Anatomical Lectures, Demonstrations, and Dissections, £12 12s.

Surgery; by Mr. Skey, on Mondays, Wednesdays, and Fridays, at 7, P.M.

Single course	£3	3	0
Unlimited	4	4	0

Unlimited to Anatomy, Demonstrations, and Surgery, £15 15s.

Medicine; by Dr. Willis, on Mondays, Wednesdays, and Fridays, at a quarter-past 8, P.M.

Single course	£4	4	0
Two courses (one session)	5	5	0
Unlimited	6	6	0

Materia Medica; by Dr. Steggall, on Mondays, Wednesdays, and Fridays, at half-past 3, P.M.

One session	£4	4	0
Unlimited	5	5	0

Midwifery; by Dr. Waller, on Tuesdays, Wednesdays, and Fridays, at a quarter to 6, P.M.

Single course	£3	3	0
Unlimited	5	5	0

Chemistry; by Mr. Scoffern, on Tuesdays, Thursdays, and Saturdays, at 10, A.M.

One session	£4	4	0
Unlimited	5	5	0

Chemistry and Materia Medica, conjointly.

One session of each	£7	7	0
Unlimited to both	8	8	0

Botany, in the Summer.

Single course	£3	3	0
Unlimited	4	4	0

Medical Jurisprudence; by Dr. S. Smith, in the Summer.

Single course	£3	3	0
Unlimited	5	5	0

Unlimited attendance on all the Lectures required by the Royal College of Surgeons and Apothecaries' Hall, £37 16s.

HUNTERIAN SCHOOL,

20, Charlotte-street, Bloomsbury-square.

Anatomy and Physiology; by Drs. V. Flood and Pettigrew, daily, except Saturday, at 3.

Entire session	£5	5	0
Perpetual	6	6	0
Perpetual to practical and descriptive anatomy, if entered to at once	12	12	0

Demonstrations and Practical Anatomy; by Drs. Flood and Pettigrew, daily, except Saturdays, at 9, A.M.

Entire session	£5	5	0
Perpetual	6	6	0

Surgery; by Mr. P. Bennett Lucas, on Mondays, Wednesdays, and Fridays, at 4, P.M.

Session	£4	4	0
Perpetual	5	5	0

Medicine; by Dr. Boyd, on Mondays, Tuesdays, Thursdays, and Saturdays, at 11, A.M.

One session	£3	3	0
Perpetual	5	5	0

Materia Medica; by Dr. Wilks, on Tuesdays, Thursdays, and Saturdays, at 10, A.M.

Entire session	£3	3	0
Perpetual	4	4	0

Midwifery; by Drs. Andrews, Sharkey, and Green, on Tuesdays, Thursdays, and Saturdays, at 4.

Entire session	£3	3	0
Perpetual	5	5	0

Chemistry; Dr. Venables, on Mondays, Wednesdays, and Fridays, at 10, A.M.

Entire session	£4	4	0
Perpetual	5	5	0

Diseases of Children; by Dr. P. H. Green.

Summer Session.

Botany; Dr. Wilks.

Entire session	£2	2	0

Medical Jurisprudence; Dr. Venables.

One course	£2	2	0

Practical Chemistry; Dr. Venables.

One course	£1	0	0

Perpetual fee for all the Lectures required by the Hall and College, £35.

CHARLOTTE STREET SCHOOL OF MEDICINE,

15, Charlotte-street, Bloomsbury.

Anatomy and Physiology, daily; by Mr. Dermott, at 3, P.M.

One session	£5	5	0
Perpetual	7	0	0

Demonstrations; by Mr. Dermott, daily, at 10, A.M.

Theory and Practice of Medicine; by Dr. W. Arnold, on Mondays, Wednesdays, and Fridays, at 4, P.M.

One session	£3	3	0
Perpetual	5	0	0

Midwifery and Diseases of Women and Children; by Dr. Ryan, on Tuesdays, Thursdays, and Saturdays, at 4, P.M.

One session	£3	3	0
Perpetual	5	0	0

Materia Medica; by Mr. W. Raleigh Baxter, on Mondays, Wednesdays, and Fridays, at 11, A.M.

One session	£3	3	0
Perpetual	4	0	0

Theory and Practice of Surgery; by Mr. Dermott, on Mondays, Wednesdays, and Fridays, at 7, P.M.

One session	£3	3	0
Perpetual	4	0	0

Botany; by Dr. Brown, in the Summer.

One session	£2	2	0
Perpetual	3	0	0

Medical Jurisprudence; by Dr. Ryan, in the Summer.

One session	£2	2	0
Perpetual	3	0	0

For all the Lectures required by the Royal College of Surgeons, Apothecaries' Hall, Army and Navy Boards, &c. &c., 30 guineas.

UNIVERSITY COLLEGE HOSPITAL,

Gower-street, St. Pancras.

SURGEONS.—Messrs. Cooper, Liston, and Quain.
PHYSICIANS.—Drs. Williams, Thomson, and Carswell.
OBSTETRIC PHYSICIAN.—Dr. Davis.

Admission to Practice and Clinical Lectures.

Students who have entered at University College to three medical courses of six months' duration (two courses of three months' duration being considered equivalent to one of six months), also students who have attended one course in a recognised school, and one year in a recognised hospital, are to pay as follows:—

Perpetual to the medical and surgical practice	£26	5	0
One year physicians' and surgeons' practice	21	0	0
One year physicians' or surgeons' practice, separately	15	15	0
Six months physicians' and surgeons' practice	15	15	0
Six months physicians' or surgeons' practice, separately	10	10	0

Pupils who have not entered to lectures in the College as above specified.

Perpetual to the medical and surgical practice	£36	15	0
One year physicians' and surgeons' practice	30	0	0
One year physicians' or surgeons' practice, separately	22	0	0
Six months physicians' and surgeons' practice	22	0	0
Six months physicians' or surgeons' practice, separately	15	0	0

Every pupil pays, in addition to the fees, 10s to the apothecary, and 5s office fee.

Times of Attendance of the Medical Officers.

The physicians' and surgeons' visits are made daily at one and two o'clock.
Each of the three physicians visits his patients three times a-week.
Medical clinical lectures are given three times a-week, one by each physician.
A surgical clinical lecture is given once a-week, by Messrs. Liston and Cooper, each once a fortnight.
House surgeons, physicians' clerks, and surgeons' dressers, are selected from students of the College, without additional payments.
Taking-in days, Tuesdays, at half-past 11. The physicians and surgeons see out-patients daily, in the morning.

UNIVERSITY COLLEGE MEDICAL SCHOOL,

Gower street, St. Pancras.

Anatomy and Physiology; by Professor Sharpey, daily, at 10, A.M.

Entire term	£6	0	0
First half	3	0	0
Second half	3	0	0
Perpetual	9	0	0

Demonstrative Anatomy and Dissections; by Professors Quain and Sharpey, and Messrs. Ellis and Morton, daily, at 12.

Entire term	£6	0	0
First half	3	0	0
Second half	3	0	0
Perpetual	9	0	0

Surgery; by Professors Cooper and Liston, on Mondays, Tuesdays, Wednesdays, and Thursdays, at 7, P.M.

The term	£4	10	0
Perpetual	6	0	0

Medicine; by Professor Williams, daily, except Saturdays, at 6, P.M.

Entire term	£5	0	0
First half	3	0	0
Second half	3	0	0
Perpetual	8	0	0

Materia Medica; by Professor A. T. Thomson, daily, except Saturday, at 3.

Entire term	£6	0	0
First half	3	0	0
Second half	3	0	0
Perpetual	9	0	0

Midwifery; by Professor Davis, daily, at 9, A.M.

Entire term	£5	0	0
First half	3	0	0
Second half	3	0	0
Perpetual	7	0	0

Chemistry; by Professor Graham, daily, at 11.

Entire term	£6	0	0
First half	3	0	0
Second half	3	0	0
Perpetual	9	0	0

Botany; by Professor Lindley, in the Summer.

Summer course	£3	0	0
Perpetual	6	0	0

Medical Jurisprudence; by Professor A. T. Thomson, in the Summer.

Comparative Anatomy; by Prof. Grant, daily, except Thursdays and Saturdays, at 3.

The course	£4	0	0

Zoology; by Professor Grant, in February, £3.

(Attendance on these two courses by Professor Grant, is recognised by the Army Medical Board as equivalent to the course of Natural History required as a qualification for army surgeons.)

In addition to the foregoing payments for each class, students not nominated by proprietors must pay 5s additional for every pound until this extra payment amounts to £4 10s; and a college fee of 10s for one class, and £1 for two or more classes, is to be paid by each student every session; in a course of short duration this fee is diminished. Payment of the matriculation fee of £2 will relieve the student during the whole course of his study, from the payment of the College fee.

SYDENHAM COLLEGE,

Grafton street, Gower-street.

Anatomy and Physiology; by Mr. Hilles and Dr. Cooke, daily, except Saturdays, at 2, P.M.

Entire session	£3	0	0
Perpetual	7	0	0

Anatomy, with Demonstrative Dissections; by Mr. Morgan, daily, except Saturday, at 12.

Entire session	£3	0	0
Perpetual	7	0	0

Medicine; by Dr. Sigmond, on Mondays, Wednesdays, and Fridays, at 5.

Entire session	£5	0	0
Perpetual	6	0	0

Surgery; by Mr. Alcock, on Mondays, Wednesdays, and Fridays, at 7, P.M.

One session	£3	0	0
Perpetual	5	0	0

Materia Medica; by Dr. Barnes, on Mondays, Tuesdays, Wednesdays, and Fridays, at 3.

One course	£2	0	0
Two courses	4	0	0
Perpetual	5	0	0

Midwifery; by Dr. Heming, on Mondays, Wednesdays, and Fridays, at 6, P.M.

One session	£3	0	0
Perpetual	5	0	0

Chemistry; by Mr. Balmain, every day, except Saturday, at 11.

Entire session	£5	0	0
Perpetual	7	0	0

Botany; by Mr. Hoblyn, in the Summer.

One course	£2	0	0
Perpetual	4	0	0

Medical Jurisprudence; by Dr. Barnes, in the Summer.

One course	£2	0	0
Perpetual	3	0	0

Dr. Marshall Hall will deliver several lectures in the course of the session.

General fee for the whole of the lectures required by the College and Hall, £40.

KING'S COLLEGE HOSPITAL,

Portugal-street, Lincoln's-Inn.

CONSULTING PHYSICIAN.—Thomas Watson, M.D.

PHYSICIANS.—George Budd, M.D., F.R.S., and R. B. Todd, M.D., F.R.S.

ASSISTANT PHYSICIAN.—W. A. Guy, M.B.

CONSULTING SURGEON.—J. M. Arnott.

SURGEONS.—W. Fergusson, F.R.S.E., and Richard Partridge, F.R.S.

ASSISTANT SURGEONS.—John Simon and William Bowman.

The Physicians and Surgeons attend daily at half-past 8 o'clock, A.M.

PHYSICIAN FOR THE DISEASES OF WOMEN AND CHILDREN.—Robert Ferguson, M.D., who attends on Tuesdays, Thursdays, and Saturdays, at 12 o'clock.

Clinical Lectures every Monday, Wednesday, Thursday, and Saturday, at half-past 9, A.M.

The physician's assistant and clinical clerks, the house-surgeon and dressers, will be selected by examination from among those matriculated students of the College who are pupils of the Hospital.

The house-surgeon must have been previously a dresser; and no dresser will be appointed whose fitness has not been ascertained by the surgeons.

Fees for Admission to the Hospital Practice and to the Clinical Lectures.

Perpetual to the medical and surgical practice:—			
For matriculated students	£31	10	0
For pupils who are not matriculated students	36	15	0
Medical practice:—			
Three months	6	6	0
Six months	10	10	0
Twelve months / Eighteen months	£15	15	0
Perpetual	21	0	0
Surgical practice:—			
Three months	10	10	0
Six months	15	15	0
Twelve months / Twenty-one months	21	0	0
Perpetual	26	5	0

KING'S COLLEGE MEDICAL SCHOOL, STRAND.

Anatomy, descriptive and surgical; by Professor Partridge, daily, at 9, A.M.

Half session	£4	4	0
Entire session	8	8	0
Unlimited	9	9	0

Practical Anatomy in the dissecting-room; by Messrs. Simon and Bowman.

Physiology; by Professor Todd, on Mondays, Tuesdays, Wednesdays, Thursdays, and Fridays, at 3.

Half session	£4	4	0
Entire session	8	8	0
Unlimited	9	9	0

Surgery; by Professor Fergusson, on Mondays, Wednesdays, Thursdays, and Fridays, at 8, P.M.

Entire session	£4	4	0
Unlimited	6	6	0

Medicine; by Professor Budd, on Mondays, Tuesdays, Wednesdays, Thursdays, and Fridays, at 4.

Half session	£3	3	0
Entire session	5	5	0
Unlimited	7	7	0

Materia Medica; by Professor Royle, on Mondays, Tuesdays, Wednesdays, Thursdays, and Fridays, at 11, A.M.

Half session	£3	3	0
Entire session	5	5	0
Unlimited	7	7	0

Midwifery; by Professor Ferguson, on Tuesdays, Thursdays, and Saturdays, at 10.

Entire session	£4	4	0
Unlimited	6	6	0

Chemistry; by Professor Daniell, on Mondays, Tuesdays, Thursdays, and Fridays, at 2.

Half session	£4	4	0
Entire session	7	7	0
Unlimited	10	10	0

Botany; by Professor Don, in the Summer.

Entire session	£3	3	0
Unlimited	4	0	0

Medical Jurisprudence; by Professor Guy, in the Summer.

Entire session	£3	3	0
Unlimited	4	4	0

Comparative Anatomy; by Professor Jones.

The session	£3	3	0
Unlimited	4	4	0

Other lectures connected with medicine are given in the Summer.

The courses which students are required to attend by the College and the Hall, may be attended at King's College for £57 15s; or for students nominated by proprietors, £53 10s. The matriculation fee is £1 1s, additional.

MIDDLESEX HOSPITAL,

Charles-street, Tottenham Court-road.

SURGEONS.—Messrs. Mayo, Arnott, and Tuson.

PHYSICIANS.—Drs. Hawkins, Watson, and Wilson.

PHYSICIAN ACCOUCHEUR.—Dr. Ashburner.

ASSISTANT SURGEON.—Mr. Shaw.

Surgical Practice.				*Medical Practice.*			
Three months	£10	10	0	Three months	£ 6	6	0
Six months	15	15	0	Six months	10	10	0
Twelve months	21	0	0	Eighteen months	15	15	0
Dresser, 6 months	21	0	0	Perpetual	22	1	0
Ditto, 12 months	31	10	0				

Times of Visits of the Medical Officers.

Mr. Mayo, Wednesdays and Saturdays.
Mr. Arnott, Mondays and Thursdays.
Mr. Tuson, Tuesdays and Fridays.

Dr. Hawkins, Tues., Thurs., and Saturdays.
Drs. Watson and Wilson, Mondays, Wednesdays, and Fridays.

Each physician and surgeon at half-past 12.
Dr. Ashburner attends on Wednesdays and Saturdays at 11 o'clock.

In-patients admitted at 12 on Tuesdays. Out-patients seen at 12 on Thursdays, by the physicians. Operations on Fridays. Clinical lectures generally on Saturdays. From the dressers the house-surgeons are elected, according to seniority.

MIDDLESEX HOSPITAL SCHOOL.

Anatomy and Physiology; by Mr. Tuson and Mr. Erasmus Wilson, daily, at 2.

Half session	£3	3	0
Entire session	5	5	0
Perpetual	9	9	0

Demonstrations and Dissections; by Mr. Tuson, Mr. Erasmus Wilson, and Mr. Lonsdale, daily, at 11.

Half session	£3	3	0
Entire session	5	5	0
Perpetual	9	9	0

Anatomy, Physiology, Demonstrations, and Dissections, together.

Perpetual	£16	16	0

Surgery; by Mr. Mayo, on Mondays, Wednesdays, and Fridays, 4, P.M.

One session	£3	3	0
Perpetual	5	5	0

Medicine; by Dr. Copland and Dr. Leighton, on Mondays, Tuesdays, Thursdays, and Fridays, at 3.

Half session	£3	3	0
Entire session	5	5	0
Perpetual	6	6	0

Materia Medica; by Dr. Crawford, on Mondays, Wednesdays, and Fridays, at 9, A.M.

Half session	£3	3	0
Perpetual	5	5	0

Midwifery; by Mr. North, on Tuesdays, Thursdays, and Saturdays, at 10, A.M.

One session	£3	3	0
Perpetual	5	5	0

Chemistry; by Mr. Everitt, on Mondays, Wednesdays, Fridays, at 10, A.M., and Saturdays, at 9, A.M.

One session	£5	5	0
Perpetual	6	6	0

Botany; by Mr. Meade, in the Summer.

Perpetual	£3	3	0

Medical Jurisprudence; by Mr. De Morgan, in the Summer.

One session	£3	3	0
Perpetual	4	4	0

Perpetual to all the above, in one payment, £45.

Clinical lectures, by Messrs. Mayo, Arnott, and Tuson; and Drs. Hawkins, Watson, and Wilson.

CHARING-CROSS HOSPITAL,

Near Charing-Cross.

SURGEONS.—Mr. Howship and Mr. Hancock.
PHYSICIANS.—Drs. Shearman, Golding, and Chowne.

Surgical Practice.				*Medical Practice.*			
Six months	£10	10	0	Six months	£10	10	0
Full period required	15	15	0	Full period required	15	15	0

For the full period to both Medical and Surgical Practice, £26 5s.

CHARING-CROSS HOSPITAL SCHOOL.

Anatomy and Physiology; by Mr. Hancock, on every day, except Saturday, at 3.

One session	£5	5	0
Two sessions	7	7	0
Unlimited	10	10	0

Practical Anatomy and Demonstrations; by Messrs. Hird and Guthrie, every day, except Saturday, at 10.

One session	£5	5	0
Two sessions	7	7	0
Unlimited	8	8	0

Surgery; by Mr. Howship, on Mondays, Wednesdays, and Fridays, at 5, P.M.

One session	£3	3	0
Two sessions	5	5	0
Unlimited	6	6	0

Medicine; by Drs. Shearman and Bennett, on Tuesdays, Wednesdays, Thursdays, and Fridays, at 4.

One session	£4	4	0
Two sessions	6	6	0
Unlimited	7	7	0

Materia Medica; by Dr. Steggall, on Mondays, Wednesdays, and Fridays, at 9, A.M.

One session	£4	4	0
Two sessions	5	5	0
Unlimited	6	6	0

Midwifery; by Dr. Chowne, on Mondays, Tuesdays, and Thursdays, at 2, P.M.

One course	£3	3	0
Two courses	5	5	0
Perpetual	6	6	0

Chemistry; by Mr. Fownes, on Tuesdays, Thursdays, and Saturdays, at 9, A.M.

One session	£5	5	0
Unlimited	6	6	0

Botany; by Dr. Willshire, in the Summer.

One course	£2	2	0
Two courses	3	3	0
Unlimited	4	4	0

Medical Jurisprudence; by Drs. Chowne and Bennett, in the Summer.

One course	£2	2	0
Two courses	3	3	0
Unlimited	4	4	0

Morbid Anatomy; by Mr. Howship, every Wednesday, at 5.

One course	£2	2	0
Two courses	3	3	0
Unlimited	4	4	0

General fee for all the lectures required by the Hall and College, £42 18s.

WESTMINSTER HOSPITAL,

Broad Sanctuary, near Westminster Abbey.

SURGEONS.—Sir A. Carlisle, Mr. White, Mr. Guthrie, and Mr. Lynn.
PHYSICIANS.—Dr. Bright, Dr. Roe, and Dr. Burne.
ASSISTANT SURGEON.—Mr. Hale Thomson.

Surgical Practice.				*Medical Practice.*			
Six months	£10	10	0	Six months	£10	10	0
Twelve months	21	0	0	Twelve months	12	12	0
				Eighteen months	15	15	0
Perpetual	31	10	0	Perpetual	21	0	0

Times of Attendance of the Medical Officers.

Dr. Bright, on Tuesdays and Fridays.
Dr. Roe, on Wednesdays and Saturdays.
Assist. Phys., Dr. Basham, daily.
Sir A. Carlisle, Tuesdays and Saturdays.
Mr. White, Mondays and Saturdays.
Mr. Guthrie, Thursdays and Saturdays.

Dr. Burne, on Mondays and Thursdays.
Mr. Lynn, Tuesdays, Wednesdays, Fridays, and Saturdays.
Assist. Surg., Mr. Hale Thomson, Tuesdays and Fridays.

In-patients admitted on Tuesdays, at 11 o'clock; out-patients seen daily, at 12 o'clock.
Clinical lectures by Drs. Roe, Burne, Sir A. Carlisle, Mr. Guthrie, and Mr. H. Thomson.
*** The School is not yet formed, Sept. 22.

ST. GEORGE'S HOSPITAL,

Hyde-Park Corner.

SURGEONS.—Mr. Keate, Mr. Hawkins, Mr. Babington, and Mr. Walker.
PHYSICIANS.—Dr. Seymour, Dr. Wilson, Dr. Macleod, and Dr. Hope.
ASSISTANT SURGEONS AND PHYSICIAN.—Mr. Walker, Mr. Cutler, and Dr. Nairne.

Surgical Practice.		*Medical Practice.*	
Six months	15 guineas.	Eighteen months	16 guineas.
Twelve months	20 guineas.	Unlimited	24 guineas.
Unlimited	50 guineas.	Fee to the Apothecary	1 guinea.

Pupils who have paid to attend the medical practice during six months, are allowed, at the end of that time, to attend the practice of the surgeons for one year, by paying 16 guineas more.

Time of Attendance of the Medical Officers.

Mr. Keate and Sir B. Brodie, on Mondays, Wednesdays, and Fridays.
Drs. Wilson and Hope, Mondays, Wednesdays, and Fridays.
Drs. Seymour and Macleod, Tuesdays,

Mr. Hawkins and Mr. Babington, on Tuesdays, Thursdays, and Saturdays.
Mr. Walker and Mr. Cutler, daily.
At half-past 12 o'clock.
Thursdays, and Saturdays.
At half-past 12.
Dr. Nairne, daily.

In-patients are admitted on Wednesdays, at half-past 12; out-patients are seen by the physicians on Mondays and Fridays, at half-past 12; and by the surgeons, daily (excepting on Thursdays), at 12. Operations, on Thursday, at one o'clock.

Entrance to the surgical practice for twelve months admits pupils in their turn to dress the patients for three months; and entrance for an unlimited period admits pupils to dress for six months.

Pupils entering for an unlimited period are eligible as assistant house-surgeons for six months, and as house-surgeons for twelve months, when properly qualified.

Pupils, when qualified, may become clinical clerks to the physicians or surgeons.

Clinical lectures by all the surgeons and physicians, except Dr. Wilson.

ST. GEORGE'S HOSPITAL SCHOOL.

Theatre of St. George's Hospital, and Theatre of Anatomy, Kinnerton-street, Wilton-place, near St, George's Hospital.

Anatomy and Physiology; by Messrs. Tatum and H. J. Johnson, daily, at half-past 2.

One course (whole session) ..£6 6 0
Perpetual..... 8 8 0

Demonstrations, with Dissections; by Messrs. H. J. and H. C. Johnson, daily, at half-past 10.

One course (whole session) ..£6 6 0
Perpetual..... 8 8 0

(The above are conducted in Kinnerton-street. The following lectures are delivered in the Theatre of St. George's Hospital.)

Surgery; by Messrs. Hawkins and Babington, on Mondays, Wednesdays, and Fridays, at 8, P.M.

Entire session £3 3 0
Perpetual..... 5 5 0

Medicine; by Drs. Macleod and Seymour, on Mondays, Wednesdays, and Fridays, at half-past 11.

Half session £3 3 0
Entire session 5 5 0
Perpetual..... 6 6 0

Materia Medica; by Drs. Macleod and Nairne, on Tuesdays, Thursdays, and Saturdays, at half-past 11.

Each course £3 3 0
Two courses..... 5 5 0
Perpetual..... 6 6 0

Midwifery; by Dr. R. Lee, on Mondays, Wednesdays, and Fridays, at 9, A.M.

Each course £3 3 0
Perpetual..... 5 5 0

Chemistry (at the Royal Institution, in Albemarle-street); by Mr. Brande and Dr. Faraday, on Tuesdays, Thursdays, and Saturdays, at 9, A.M.

One course £6 6 0
Perpetual..... 8 8 0

Botany; by Dr. Dickson, in the Summer.

One course £3 3 0
Perpetual..... 4 4 0

Medical Jurisprudence; by Dr. Nairne and Mr. Macaulay, in the Summer.

Each course £3 3 0
Perpetual..... 4 4 0

A Course of Lectures, illustrative of some important parts of Surgery; by Sir C. B. Brodie, Bart., every Tuesday, at half-past 1, P.M.

ST. GEORGE'S SCHOOL,

1, Grosvenor-place, Hyde Park Corner, adjoining St. George's Hospital.

Anatomy and Physiology; by Mr. Lane, daily, at half-past 2.

Complete course.....£6 6 0
Unlimited..... 8 8 0

Practical Anatomy, with Demonstrations; by Messrs. Meade and Ancram, daily, at half-past 10.

Complete course.....£6 6 0
Unlimited..... 8 8 0

Surgery; by Mr. Lane and Mr. Chapman, on Mondays, Wednesdays, and Fridays, at 9, A.M.

Complete course.....£3 3 0
Perpetual..... 5 5 0

Medicine; by Drs. Sigmond and Fitzherbert, on Mondays, Wednesdays, and Fridays, at half-past 11, A.M.

Complete course £5 5 0
Perpetual..... 6 6 0

Materia Medica; by Dr. Sigmond, on Tuesdays, Thursdays, and Saturdays, at half-past 11, A.M.

Complete course.....£3 3 0
Perpetual..... 5 5 0

Midwifery; by Mr. Bloxam, on Mondays, Wednesdays, and Fridays, at 7, P.M.

Complete course.....£3 3 0
Perpetual..... 5 5 0

Chemistry; by Mr. Balmain, on Tuesdays, Thursdays, and Saturdays, at 9, A.M.

Complete course.....£5 5 0
Perpetual..... 6 6 0

Jurisprudence; by Messrs. Hutchins and Ancell, during the Summer.

Botany; during the Summer.

General fee to the whole of the lectures, £12.

INFIRMARY PRACTICE.—The medical practice of the St. Marylebone Infirmary has been "recognised" within the last few months at the College of Surgeons and Apothecaries' Hall, and certificates of attendance thereon are received at those institutions in the same manner as from the hospitals. Pupils are admitted to the practice on fair and reasonable terms. The resident physician of the establishment is Dr. R. Boyd, who is charged with the practical and pathological instruction of the pupils, in conjunction with the senior physician. The infirmary practice includes, in addition to the usual cases of the hospitals, the treatment of the diseases of infancy and childhood, of pregnancy and parturition, mental diseases, &c. A better clinical school, if properly conducted, it would be difficult to find in London, we have often before expressed our opinion in favour of the comparative advantages of such an infirmary for the practical study of medicine, and now repeat it, in connection with this establishment.

Dr. Aldis, physician to the London Dispensary, will deliver a Course of Lectures on the Principles and Practice of Medicine, at his residence, 13, Old Burlington-street, at 4, P.M.

One course.....£2 2 0
Perpetual..... 3 3 0

It generally happens that a student has decided, previously to arriving in town, upon the school to which he shall enter. If he have not, the point of the first importance for his decision is the hospital which he can best attend; and, secondly, the school nearest to that hospital where he may attain the greatest amount of *useful* information. He will usually find two, and sometimes more, schools in the immediate neighbourhood of the selected hospital; in determining which of these he should prefer, he must not decide blindly at once, and repent for three years thereafter; but must reflect well upon and balance the subject carefully, guided by the principles which we shall set forth in the course of this sketch, in which we shall consider the nature of his medical studies.

Having decided upon his hospital, the student's next attention should be directed to the attainment of a lodging as near to the establishment of study as convenient. He must not calculate upon the "advantages of a long walk" to his lectures, for, in addition to the loss of time consequent upon such a walk, he will find wet mornings and drowsy feelings greatly to interfere with the promising intentions of young October.

In the prosecution of his studies, our young friend must bear in mind the absolute necessity for industry and perseverance. He must commence with few subjects, and pursue them thoroughly; if he divide his mind among many he will become harassed and distressed, probably oppressed with illness, and unable to proceed through the projected course. How many young men fail altogether by attempting too much! How many, again, fail by imitating the hare rather than the tortoise, going too fast for a short distance, reposing on the way, and discovering to their regret that the end of the season has arrived ere they have recovered their powers of exertion!

On their first arrival in town, medical students are remarkable for their healthy appearance; let them guard their health with every care, as the greatest blessing they can possess, as the strongest auxiliary for ultimate success. Close application and study demand a good store of health; and if health be wanting, their best exertions must fail. If health be thus important—be thus valuable—need we farther warn the young disciple of medicine to avoid those causes which unquestionably destroy so choice a possession. The days of drinking, of smoking, of regaling during the natural hours of sleep, of theatre-haunting, dissipation, and debauchery, are fast passing away; they are no longer "respectable," even with those who are so weak as to yield themselves, like beasts, to debasing indulgences. By the honest, the upright, the well-conducted member of society, they are looked upon as in the highest degree contemptible and degrading. Observe the drunkard and the dissipated, how they quail under the steady regard of the industrious and deserving. They are, in truth, maniacs,—incapable of commanding their passions,—fit subjects for strait-jackets, and hobbles,—and dangerous maniacs too,—maniacs who are to be most studiously avoided; for their desire at all times is to lead others into their own paths, until the latter sink as low in infamy as themselves. But we turn from this sickening picture with a hope that our duty to the rising members of a noble profession do not require us to dwell longer on so foul a spot in human existence.

The subjects to which the student's attention is particularly called, during the first winter session, by the curricula of the College of Surgeons and Apothecaries' Hall, are Anatomy, Physiology, Chemistry, and Materia Medica. We will examine these subjects in their turn, and make such observations upon each as may be conducive to the student's interest.

Anatomy.—For a knowledge of anatomy, the student must look principally to himself. With a good book, and the subject before him, he must be content to labour,—to plod. In the dissecting-room he will find demonstrators who must point out to him the structures of which he may be ignorant; answer his questions; describe his dissections; but let him not seek the demonstrator until he has worked the subject well by himself. One fact learnt alone is worth a dozen pointed out by others. Knowledge is the result of the combined actions of observation and comparison; and these two powers once properly concentrated on a subject of study, the difficulty is at an end.

The objects of dissection are twofold: first, to familiarise the student with the use and application of the knife, that when

in his future life the occasion happens, he may operate with precision, ease, and celerity, for all these conduce to the comfort and welfare of his patient. Let him dissect, then, to practise his knife. Yet how many are there whose greatest happiness consists in giving up the scalpel to a more industrious friend, or to the demonstrator, while they, astride upon a stool before the fire, seem only intent upon gaining the largest amount of caloric in their nether end.

The second object of dissecting is to learn, by means of the eye and the touch, the size, the form, the position, and the relations of the different component parts of the body,—not to enable the learner to pass the child ish ordeals of Lincoln's-inn Fields, or Apothecaries' Hall, both of which have been often successfully faced without a sight of the dead body, but for the purpose of being able to make a correct diagnosis of disease, and of becoming well-informed and useful members of their profession. Let not the student disregard anatomy, it is the real and only solid groundwork of a good knowledge of medicine.

Anatomy in the lecture-room is of three kinds: 1, It may be taught in an original and agreeable, and, at the same time, a practical form, by an able teacher; 2, it may be the dull and tedious repetition of some book on anatomy learned by heart; or, 3, a rhodomontade equally obscure to the teacher and to the listener: the latter class of oratorical literature may be denominated *lecturing* in contradistinction to *teaching*. To the student's natural perception we must leave the discrimination of these very different attempts at communicating instruction, and we may inform him that it is not always the largest or the most numerously-thronged school that will provide him with the first class of teacher. Let him always remember that facts, by those who understand their application, always admit of a clear and distinct description. The instruction to be communicated in lectures should be so clearly and ably expressed in words, that a novice may follow even difficult problems in science. If the description be not of this kind, we must rank the orator in the second or third category of our classification. A complex subject, rendered in obscure language, becomes wholly unintelligible, and the lecturer might, with as much advantage to his class, repeat his sermons in Dutch.

As anatomy is strictly a demonstrative course, the larger schools labour under a disadvantage, on account of the distance at which the students are placed from the subject under examination on the table.

The same remarks apply to the dissecting-room, where noise and bustle and mischievous pranks are the frequent penalties of a large concourse.

Physiology.—In most of the schools, physiology is combined with anatomy, to the advantage of the student. In some few, it forms a distinct subject; and being, as *generally* taught, inadequate to occupy a course of seven months' duration, has been so unnaturally extended by the admission of other subjects, particularly of comparative anatomy, and matters having no practical tendency, that should the student alight on the benches of any theatre in which such a course is delivered, he may gain an hour's reading at night by losing one in sleeping during the day. No subject requires more judicious handling than physiology; it is one that is capable of extension to any length, but its practical applications are equally susceptible of condensation into a comparatively small number of facts.

Chemistry.—In pursuing a course of chemistry, the student should inform himself upon the subject of each lecture by careful reading before entering the class-room. The subject is purely practical and demonstrative; and having gained a previous knowledge of the principal intention, he is better enabled to follow with his eye the various manipulations by which the statements of the lecturer are proved, and which he can afterwards repeat in the laboratory by himself. A sound knowledge of chemistry will, like anatomy, greatly facilitate his treatment of disease, and enable him to understand the most important problems of physiology.

Materia Medica and Therapeutics involve much matter of high interest, and much more that is comparatively useless. Like anatomy and chemistry, this is a practical course; in which the eye, the touch, and the taste, are principally concerned; the lore on the subject is much better attained from books. Lecturers sometimes pretend to develop this subject in a series of written

discourses, reading the pages of their own books, while the students are shooting colocynth pills at each other, devouring the amygdalæ dulces et amaræ, the tamarinds, and the jujubes; harlequinading the jalap into the rhubarb bottle, and the calomel into the pulvis cretæ jar, and filling their neighbour's pockets with other therapeutic agents. What else can be expected from a class of young men who have assembled for practical and demonstrative instruction, and who are treated with the monotonous verbiage of those abominations of our schools, written lectures? How often have we seen the should-be-black precipitates fall white; and the white, red or blue, to the no small amusement of the class, or of the mischievous wags in the first row, who, during the learned lecturer's absorption in his prosy leaves, have transferred the contents of each test glass into that of its neighbour.

Some of the student's greatest difficulties in his examination turn upon materia medica, with which he must be thoroughly familiar; and as he has not the opportunity in this, as in anatomy and chemistry, in the dissecting-room or the laboratory, of working for himself, he had better at once betake himself to the private teacher, who usually furnishes means of practical study, which are not to be obtained in the public and larger schools.

The second and the third winter sessions again open with anatomy, and particularly with dissections; showing the necessity of directing the attention, continually, to those important subjects.

Medicine.—During the second winter the student is also recommended to study the theory and the practice of medicine. The former of these is best learned from books, wherein are recorded the carefully-digested and well-considered principles which should direct the student's decisions. The latter, practical medicine, is to be studied only in the wards of the hospital, or infirmary, by the bedside of the patient; or in the dispensary, and the lowly dwellings of its applicant sick. Lectures on this subject are wholly and absolutely useless; but by the avaricious tyranny that directs the regulations of our corporate institutions, certificates of attendance are needed, so that the student must take his seat in the theatre, and either repose his head on the lap of Somnus, or carry with him a good work on medicine, and study from its pages the subjects which the lecturer may be engaged in developing.

By a remarkable perversion of propriety, the only part of the practice of medicine which might be rendered practically available to the wants of the student, viz., pathology, forms no part of the course; indeed, in most instances, the lecturer on the practice of medicine pretends to no knowledge of that subject, and leaves it in the hands of the anatomist. In this course we have no patients shown to the students, presenting instances of the disease in question. We have no large drawings and diagrams exhibited. The entire ceremony generally consists, in the driving up of the physician's carriage to the door of the theatre, the ejaculation of an hour of words, less creditably or ably arranged than those of the commonest publication, a bow, a step into the carriage, and a return home to dinner.

Surgery is open to all the strictures we have been obliged to make upon medicine. We have the old and prosy author diffusing again his well-learnt sentences, while the waggish student follows, in the last edition of his work, from line to line, his every word. Last year, this year, still the same. No patients exhibited—no drawings—some few muddy preparations, or mangled morsels, so disfigured, that not even the poor body from whom they were robbed could tell the identical spots to which they belonged. There is no course in the whole routine of the pupil's studies so amusingly somnolent as this; the lecturer is half asleep, or subcomatose with the last half-bottle which vanished down his œsophagus before he rose from table; the audience are three parts nodding, with spasmodic jerks; or breathing a double bass to the lecturer's falsetto. Surgical lectures are good for nothing—the hospital, the bedside, the clinical theatre, are the only sources of instruction in surgery.

Midwifery.—In the hands of some of our lecturers, midwifery is a course of much importance,—drawings, preparations, apparatus, form a part of the instruction, and render it demonstrative and practical. Moreover, it enjoys the advantage of being more limited in the number of its lectures than several of the preceding.

The information which is thus gained in the lecture-room has next to be applied in the obstetric chamber; and here a dreadful

picture discloses itself. The lecturers on midwifery, for the purpose of supplying the students with practice in the art, are all connected with some kind of "charity," variously entitled Maternity, Institution, &c. On presenting themselves, the poor petitioners are assigned to the care of two, three, or four of the students, whose names and addresses are placed upon the order for attendance. When the time arrives, a messenger is sent to the first gentleman on the list;—it happens to be a cold night—he declares himself "out." Away posts the messenger to the second; he has a few friends and a cigar; he is also "out." The third is really *out*; and the poor patient, relying on a benevolent "charity," is left to nature, or is obliged to pay either a neighbouring medical man or a midwife. "He's out," said a pert servant to a poor woman, as she one morning presented one of the midwifery "letters" at the door of the medical officer's house. "Ah," said the old woman with a groan, "that's always the way with these charity letters; I hates 'em; that's the way a poor soul is left to die!' Alas! that humble criticism is but too often true.

In some of the schools the lecturers on midwifery have endeavoured to remedy this abuse, by requiring the student, before receiving a case, to deposit a sum of money, which is laid out in fees to midwives if he do not attend, and which is returned to him if no such omissions have occurred, on the termination of his attendance on the midwifery cases.

Botany is one of the courses attended during the summer season, when subjects are most plentiful. It is strictly a demonstrative course, and does not admit of lecturing. Indeed, with a good book before him, in a large garden, or in the fields, the student will scarcely need the aid of an instructor in this subject.

Medical Jurisprudence is separated into two divisions: one a practical portion, embracing toxicology, which can be studied successfully only in the laboratory, and demands the most attentive consideration; and the other a theoretical branch, which may be pursued with more success in the closet than in the lecture-room. In the latter situation the student must be regarded as sitting for his certificate; for, excepting the jaurient anecdotes which the subject sometimes allows to be developed, where good taste is deficient, and which, form the "hits" of the lecturer, the lectures, as they are at present conducted, are excessively dull, and consist often of stale and inapplicable precedents and opinions, reproduced with little force, and no completeness.

Hospital Practice.—The remaining departments, into which "medical studies" are divided in our schools, comprise the attendance at the hospitals, known by the term of "*walking*" the hospital; a process which, generally, in practice, amounts to "*running* the hospital." There exists no greater abuse in our medical institutions, than the entire absence of all regulation by which the student may attain a knowledge of the mode of treating the sick, by his attendance in the wards where they lie.

Students of medicine have, unfortunately, been brought up by the governing institutions under the deceptive notion, that to "enter to a hospital" is to become a "doctor," or a "surgeon;" consequently, the legitimate object of that proceeding is wholly masked and forgotten. One enters a particular hospital because his friend has done so; another, because a popular physician, or a "capital fellow" of a surgeon, is attached thereto; another, because the fee is lower. On the latter score there is some sense in the ground of choice, if the opportunities of instruction be equal in that hospital to those of its contemporaries. But any hospital will be dear to the student who does not use it to the best advantage, and adopt some effectual measures for enforcing the observance of the rights and privileges for which he has paid in the admission fee. On this subject we may give to the students generally a little advice on an early occasion. An important subject is the question of the rights and privileges of pupils in our hospitals. At present we shall simply observe, that the hospitals where the fullest CLINICAL INSTRUCTION at the bedside and in the *lecture-room* is obtainable, will be the best hospitals for all students to attend.

LECTURES
ON THE ORGANS OF REPRODUCTION IN THE ANIMAL KINGDOM.

DELIVERED IN THE ROYAL COLLEGE OF SURGEONS, LONDON.

By Professor OWEN, F.R.S.

LECTURE XIV.—May 21, 1840.

To ascertain how far the reproductive organs of the vertebrate division of the animal kingdom form a complete natural system, it is necessary to compare the lowest forms of this division with the earliest appearance of the organs in man. In the embryo of man, the essential organs of generation are internal, and preceded by an extensive and remarkable organ, the Wolffian body, from which the testes and the ovaries are developed. The external organs are afterwards formed; the urethral canal is at first a mere opening; then the penis is grooved, and at a future period converted into a true canal.

In the Lamprey, Salmonidæ, &c., it has been seen that the essential organs are internal, that the testis has no efferent duct; that the seminal secretion passes first into the abdominal cavity, and then through the peritoneal canal into the common urino-sexual cavity or cloaca. In the Sturgeon, a second stage in the progressive development is seen; where the testis still pours its secretion into the abdominal cavity, but where, a short tube with a patulous opening, is found towards the posterior part of the extremity of the abdominal cavity, and serves the office of a vas deferens in conveying the seminal secretion to the cloacal aperture. The third grade is represented by the Herring, and by most osseous fishes, wherein an efferent duct passes off from each testis, and the two unite to form a common vas deferens, which terminates at the cloacal opening. A higher stage is observed in the active predatory fishes, as in the Shark; the testis presents a more aggregated form, is surrounded by a proper tunica albuginea, and by a peritoneal covering; the excretory duct is convoluted, and in its course backwards dilates into a large membranous reservoir, which terminates on a small papilla, or rudimentary penis in the cloacal cavity. In the amphibious subdivision of reptiles, the intromittent organ is completely rudimentary, as in fishes.

When the intromittent organ makes its appearance, it presents two typical forms. In the Serpent there is no external appearance of an intromittent organ; such an appendage in an animal destined to creep upon its belly on the surface of the earth, would have been highly inconvenient. But when the sexual organ is excited, four distinct organs, covered by hard cuticular papillæ, are extruded from the cloacal aperture. In the Crocodile, the testes are situated between and somewhat in front of the kidneys. They are composed of elongated seminal tubuli, twice as large in diameter as those in man. The vasa deferentia are convoluted, and terminate in the second or urethro-sexual chamber of the cloaca. In the third compartment of the cloaca or vestibule, is situated a grooved intromittent organ, with a rudimentary glans, containing erectile tissue in its structure, and attached by two crura to the rami of the ischium and pubis. At the base of the penis on each side is a small opening which leads into the peritoneal cavity; and a prolongation from this canal, extends into the substance of the penis and there terminates.

In the Marine Tortoises, which are less completely covered by a shell than those inhabiting the land, and therefore, where almost as little obstacle to coitus exists as in the Crocodile, the penis is scarcely more developed. The vasa deferentia are more convoluted, and constitute an incipient epididymis; and the peritoneal canals, as seen in a beautiful dissection made by Mr. Langstaff, terminate exclusively in the substance of the penis. In the Land Tortoises, where the increased size of the shell offers a greater obstacle to coition, the penis is of prodigious size, a character that will be generally observed amongst animals, in which proximity of the sexes is rendered difficult by their peculiar conformation; as the Armadillo, &c. The vasa deferentia of the Tortoise terminate in the urethro-sexual compartment of the cloaca above the opening of the ureters, and below the allantoid bladder. This organ can scarcely be considered as the urinary bladder, for the urine passes but rarely into it, and the ureters, as has just been seen, open into the cloaca, at a certain distance below the orifice of the bladder. It is, indeed, a remnant of the allantois, and serves an office connected, very probably, with the respiratory system. In the vestibular compartment is seen the grooved penis, an organ of very large size, the groove being convertible by the distention of the erectile tissue into a perfect urethral canal. The peritoneal canal terminates within the penis by several cæcal tubuli. In the Mud Tortoise or Tryonix, the generative structures are more complicated, particularly the intromittent organ.

Birds.—From reptiles the transition to birds is easy; they constitute the great natural group of oviparous animals. In the male organs there is a descent in complexity of structure. In many birds there is no penis; the testes are always situated in the abdomen, near its superior part, and opposite the upper end of the kidneys; and they are perfectly symmetrical in their position. The kidneys are placed in those large bony excavations upon the anterior part of the pelvis, and project very little into the

abdominal cavity. The vasa deferentia, remarkable for the beautiful transverse convolutions which they make in their course, pass down in front of the kidneys, and forming dilatations near their extremities, terminate in the cloaca upon two papillæ.

In the Crane, there is a fleshy, glandular body attached to the vas deferens, its entire length; this is something more than the epididymis seen in the Chelonia. In the Ostrich, at the upper third of the vas deferens, there is a glandular mass composed of tubular follicles, communicating with the excretory duct, and terminating in cæcal extremities. This is a persistent portion of the corpus Wolffianum, and in many birds, more or less, of this primordial body may be distinguished.

In birds of flight, both diurnal and nocturnal, the male generative organs resemble those already described. In most aquatic birds, there is an especial intromittent organ very similar in type to that of the Serpent, consisting of the cæcal tube capable of eversion, and not apparent exteriorly. Among Anseres the penis is of very large size: in the Drake it is also of large size, and surrounded by a spiral groove. The vasa deferentia terminate at its base. In birds which are incapable of flight the organ is very large; it is composed of a fibrous covering containing erectile tissue, grooved upon its upper part, and furnished with a retractile ligament of tissue jaune.

Where the penis is wholly wanting, and is represented merely by two small papillæ, as in the fowl, it is but natural to inquire how impregnation is effected. The coitus is extremely rapid, and yet a single act is known, as in the Turkey, to fecundate fifteen or twenty eggs. During the act of coitus, the cloacæ of both male and female are everted, and brought in contact, and the male fluid is injected forcibly against the mucous surface of the cloaca of the female. When it has reached this situation, there are two powers by which it may be conducted onwards to the ova; the vibratile cilia, which are known to line these tubes in such abundance; and, secondly, the contractile movement of the spermatozoa. Spallanzani has already shown how small a quantity of the male fluid is required to fertilize a great number of ova.

Mammalia.—Mammiferous animals are all provided with a well-developed penis, and in all the organ is perforated by the urethral canal. The first order in which the construction of the male organs should be examined, is Monotrema, which includes the genera ornythorynchus and echidna. The essential organs are included within the abdominal cavity; they have no distinct epididymis, and the vas deferens presents the bird-like character of transverse convolutions. The seminal fluid is poured out into the upper part of the cloaca above the openings of the ureters, as in the Turtle. The penis is of large size, and enclosed in a long sheath, within the wall of the cloaca, it is not apparent externally; hence the name assigned to these animals by Geoffroy St. Hilaire, monotrema, i.e., possessing but one opening. An external and pendant intromittent organ in Monotremata, would have been a great inconvenience to them, from the widely-separated position of the legs. The semen poured into the upper part of the cloaca is not conveyed away with the excrementitious matters, but is forced, by means of a powerful sphincter muscle, through a small opening in the wall of the cloaca, into the tubular urethral canal of the penis; the vigorous muscular action serving at the same time to erect the intromittent organ.

Hunter, in his interesting speculations upon the intention of the vesiculæ seminales in the animal economy, long since announced his belief, that had there been no testes there would have existed no penis, and that the perforation of this organ for the passage of the urine was perfectly secondary and accidental. It is curious, therefore, to observe, that here, at the very threshold of the mammiferous class, a distinct penis should be present, which is intended solely for the transmission of semen, and never gives passage to urine.

In the Ornythorynchus there exists a remarkable spur, pierced by a canal, and communicating with a gland situated between the muscles and integument, upon the hinder legs of the male. This organ undoubtedly performs some function in relation with the generative system; it is found only in the male, being rudimentary in the female; but our speculations on its use are wholly hypothetical.

The next group of animals which would follow the Monotremata, in pursuing a natural system, are the Marsupiata. They have no external trace of intromittent organ, and but one cloacal outlet; hence they are as much monotrematous as the preceding group. The testes are situated, for the first time in the ascending scale of the animal kingdom, externally, and are inclosed in a scrotum; the scrotum being placed, as in the Flying Opossum, in front of the penis. Corresponding with this part in the female, is an inversion of the integument, forming a kind of pouch, within which are situated the mammary glands. These organs are surrounded by a plane of muscular fibres, which wind around the marsupial bones, as through a pulley, and have the power of compressing the glands. The testes, in like manner, are also inclosed by a muscular layer; the cremaster playing around the marsupial bones. These bones are simply an ossification of the internal pillars of the external abdominal ring, and are not merely intended to support the pouch which is found in the females of these animals; they likewise serve an office

in the males, and in both are intended to aid in the action of muscles. The testes of Marsupiata are possessed of a tunica vaginalis, as well as a tunica albuginea; and the canal of the former always communicates with the abdominal cavity.

In regarding the progressive complication in the structure of the testis, we shall observe, that the earliest form of this organ possesses a texture of oval or spherical cells, very similar to that of the ovaries; and into these cells the semen is secreted. The secreted fluid is then, by a process similar to dehiscence, poured into the abdominal cavity, and thence evacuated by the peritoneal canals. In the second grade, the organ is composed of a number of tubuli, which anastomose frequently with each other, and terminate near the surface by cæcal follicles. In the third form, the tubuli are longer, their coats more distinct, and more closely aggregated, and the cæcal terminations more distinct and numerous, as in the Frog. By increasing in length of tubuli, becoming smaller in diameter, and inosculating frequently, we are gradually brought up to the structure of the organ in man. This subject has been most ably, minutely, and admirably elaborated by Sir Astley Cooper, whose work leaves little to be desired upon the anatomy of the testis. The structure of the organ may, however, be seen more distinctly in some of the lower animals, particularly in such as have an increase of the testis during the breeding season, as the Armadillo. The testis of man and of the higher animals is composed of numerous lobes; whereas in the Frog there is but one lobe.

In the description of the tubuli seminiferi, Sir Astley Cooper and Müller express their opinion of the cæcal termination of these glandular ducts. Krause and Lauth maintain that they terminate by anastomosis. The anastomosis of the tubuli is very distinct in the Rat, and in the inferior mammifera. Besides the anastomosis among the tubuli, another anastomotic communication occurs in the rete testis.

From the large assemblage of ducts externally to the testis, and forming the epididymis, this organ possesses somewhat of the character of a bilobate gland.

NOTE FROM MR. DUFFIN.

To the Editor of THE LANCET.

SIR:—You will oblige me by inserting the following correction, along with my communication of this week. At page 927 of last Number the words, "*should it do so, I propose hereafter to divide the adductor tendon of the left eye,*" should have been omitted. Without this alteration I may stand accused of proposing a very absurd operation. Yours, respectfully,

E. W. DUFFIN.

AN

INQUIRY INTO SOME

OF THE

CONSEQUENCES AND CAUSES OF FAILURE

OF THE

NEW OPERATION

FOR THE CURE OF

STRABISMUS, OR SQUINTING.

By E. W. DUFFIN, *Esq., Surgeon.*

WE cannot reflect on the phenomena which characterise the two last cases related in the second portion of this communication (Sept. 18th), without attempting some solution of their peculiarities. In the first patient, it will be recollected, that although only *one* eye, the left, was subjected to operation, *both* eyes respectively were brought under an undue ascendancy of the external rectus, when this muscle was called into action by directing the axis of the eye to an object placed at either side of the individual, without turning the head. When the girl looked at anything placed at the left-hand side of her, the cornea of the corresponding eye was partially buried in the external canthus, while the pupil of the right eye was not moved beyond the centre of the orbit, and *vice versâ* when the object was placed to the right of her, though certainly not in so great a degree. Her sight was, under either circumstance, double, and the position of the eyes that of a very unpleasant leer; but she could regard an object placed directly before her with the most perfect accuracy.

In the second case, the young lady squinted with both eyes, though in no very remarkable degree. The first operation on the left eye was attended by every indication of the most complete success. At the expiration of three weeks, the tendon of the adductor in the right eye was divided, and instantly the pupil of the left was turned outwards, and vision became double, even when she looked at an object placed immediately before her. In the course of an hour or two after the operation, however, she acquired the power of directing the axes of the eyes with the utmost accuracy, when the object was placed before her; but it was found, if she looked at anything on one side of her, that then the external rectus of that side exerted so great an ascendancy, as to completely turn the cornea to the external angle of the orbit, when she saw two objects instead of one. This undue action of the external rectus, however, was more marked in the left eye, that first operated upon, than in the right, in which, indeed, it now no longer exists; hence I am in hopes that, in the course of a short time, it will wholly cease in the left eye also.

The facts of these two cases suggest seve-

ral very important and interesting queries worthy the attentive consideration of the physiologist, the accurate solution of which would clear up much of the difficulty that attends the theory of that singular sympathy which exists between the two eyes, in order that their axes may be always so directed to the same object as to render vision single. The more we investigate this subject, the more we shall be struck with the beautiful and inexhaustible resources of nature, and admire the consummate wisdom, skill, and beneficence with which she adapts them to the accomplishment of the end in view. When the adductor muscle is cut across, and the eye liberated completely from any adventitious or other attachment that may still retain it in its unnatural position, the abductor muscle, if in a healthy condition, immediately draws the pupil to the *visual* centre of the orbit, for the *true* centre of the orbit is not the natural position of the pupil, when the eyes are directed into space.*

In some instances, immediately after the adductor is divided, the cornea is turned somewhat outwards, and remains in this situation for a day or two, or even much longer, until, as it would appear, a reunion is effected between the divided tendon and the sclerotica, which generally takes place within 14 or 16 days, the new attachment being a little behind the original insertion, and, what is very satisfactory, without any return of the original evil.

The first question, then, which suggests itself is, Why does not the abductor, in every instance, turn the eye outwards when its antagonist muscle is divided? The most simple and natural reply to this query seems to be the fact, that in a state of health voluntary muscles have no disposition to contract, unless called into action by an effort of the will; and that when the eye is restored to the position it ought to occupy, the abductor muscle, being then completely relaxed, will not draw it unduly outwards, unless that effort of the will be exerted. When, however, it does act in this untoward manner, we may argue that having been long accustomed to exert its influence against a morbidly-contracted antagonist, and other sources of opposition, it may have acquired more than natural powers of contraction; but these cease in the course of a short time, being lost either from want of practice or from being met by an equivalent degree of resistance, when a new union takes place between the divided tendon and the eyeball. Should there exist a considerable cast in the other eye, then we have an additional power to favour this undue contraction. We must recollect, in such case, when the individual looks outwards to the side that has been the subject of operation, that the eye not operated upon will be turned more than naturally towards the nasal canthus, and that the effort to render the axes of the two eyes more correct, has been favoured by the division of the adductor, or antagonising force. Hence the eye that has been operated upon will be unduly directed outwards, in order that its axis may correspond with its faulty companion.

But it sometimes happens, we have seen, that the eye not subjected to operation is directed outwards, as well as that in which the tendon has been cut. How, then, are we to explain this apparent anomaly?

The abductor and the adductor, it is true, are antagonist muscles, but their actions are performed quite independent of each other, the controlling power of each is to be sought for in the corresponding muscles of the opposite eye respectively; i.e., the abductor of the one eye and the adductor of the other, act in concert, and modify or restrain the irregularities of each other in all the consentaneous lateral motions of the globe that demand an effort of the will. The external rectus, for example, of the right eye, is the antagonist of the corresponding internal muscle, but its controlling power is seated in the adductor of the opposite eye; and thus it is we are enabled to direct both organs laterally, so as to make their axes correspond.

If, then, the internal muscle of the left eye be cut across, its antagonist does not contract unduly, unless from the temporary cause alluded to, because it is still in connection with its controlling power, the adductor of the right side, and the nerves which supply it with energy; and were it to turn the pupil of the eye to which it is attached outwards, the adductor of the other eye with which it operates consentaneously, would turn the pupil of the eye to which it belongs inwards; an effect it only produces when called into action by an effort of the will. But if the adductor of the right eye is much contracted, and an obliquity exists in this eye also, then it is possible that the direction of the pupil outwards may not proceed from the cause already alluded to, but from that nervous sympathy which regulates the consentaneous motions of the two eyes, more especially when the person directs the pupils to an object placed at one side of him. It will be remembered that as the one pupil, under these circumstances, is nearly buried in the inner canthus, so the other must turn very much outwards, in order that the axis of each may correspond.

If we proceed still further in this inquiry, and examine the anatomical distribution of the nerves, we are at once struck with the omniscient foresight evinced in this particular. Were the external and internal recti muscles

* If a careful measurement be made when the eyes are completely quiescent, it will be found that the pupil is placed, in a very trifling degree, nearer to the inner canthus than to the centre, between this and the outer angle.

supplied with energy from the same source, the third nerve, the consequence would be, that when these organs are called upon to contract by an effort of the will, they would do so simultaneously, and thus the eye would remain fixed between two antagonising forces; but fortunately these muscles are not supplied with energy from the same source; the internal, superior, and inferior recti all deriving their energy from the third pair of nerves, while the external rectus is supplied by the sixth pair.

On the other hand, were the functions of the abductors not controlled by the nervous communication that subsists between them and the adductor muscles of the opposite eyes respectively, we should find both of the external recti to be excited into contraction simultaneously by the same act of volition; the consequence of which would be, that both eyes would turn to the external angle, instead of the one being turned inwards and the other outwards, as nature has so wisely designed.

When the eyes, then, are fixed on an object placed at either side of the individual, the adductor of the one eye and the abductor of the other act in concert. If the internal rectus of the left eye, for example, be divided, the eye does not turn unduly outwards when the pupils are directed to an object placed at the left hand of the individual, because the left eye in such case acts in concert with the right, and the nervous energy by which each is respectively controlled remains entire; the sixth nerve on the one side, and the third nerve on the other. That the abductor, therefore, should contract beyond the desired extent when its antagonising adductor is divided, is not natural, because the muscle and nerve by which its contractions are sympathetically regulated, and by the consentaneous influence of which vision is rendered single, remain unimpaired. Besides, it will be remembered, that after an eye has been operated upon successfully, the individual is no longer capable of directing the pupil inwards, and that, consequently, as the eyes perform their functions and movements in concert, the controlling power, which retains their axes parallel under ordinary circumstances, even when both adductors are divided, will have a disposition to restrain the contractions of the abductors within natural limits, although in every instance this sympathetic influence may not be sufficient for that purpose.

The two muscles that contract together to produce the same movement in both eyes, viz., the two adductors, are supplied with nerves from the same source; while those which produce in each eye a different movement, calculated to fulfil the same end, are supplied with different nerves; but these nerves, it will be recollected, are united together at various points of their course in a most remarkable manner, as will presently be demonstrated. Indeed, they become sufficiently identical, if I may so express myself, to perform the function of one nerve. When, therefore, the eye is directed unduly to the outer angle of the orbit, after the internal rectus is divided, we can only explain the circumstance by supposing that the antagonising muscle, no longer meeting with the physical resistance which has rendered it unusually powerful, contracts, *pro tempore*, more than is desirable, because it is in reality the stronger muscle, although till the eye was liberated this did not appear to be the case.

The truth is, as before stated, it had to contend not only against its morbidly shortened antagonist, but also against a thickened, contracted, and, perhaps, adherent condition of the submuscular cellular tissue, which, to a certain extent, bound the eye in its abnormal position. The unnatural position of the eye outwards, therefore, under such circumstances, is seldom of long duration; the resistance being destroyed, the cause of increased power in the muscle ceases, and in a short time the eye is restored to its natural position.

This explanation, it may be argued, clears up the difficulty very fairly, as regards the young person in whom only one eye was operated upon; but it does not explain the other, in which no mal-direction of the pupils occurred until the operation had been performed on the second eye also. In this case it appears to me that the abductor of the left side did not evince any disposition to inordinate action, when its antagonising adductor muscle was divided, because it had not acquired any undue contractile power, and was still under the natural influence of the adductor of the right eye, and the nerves by which the muscle is supplied.

The obliquity of vision, moreover, was not great, and the motions of the eye, by voluntary effort, were very free; hence we may conclude, that the external rectus had not been habituated to contend against any unnatural resistance, which might strengthen its ordinary powers of contraction. But for what reason, as soon as the second operation was performed, both abductors should evince a disposition, when called into action, to draw the pupil unduly outwards, is not very clear. It is true, the muscles with which they each previously acted in concord, were severed from their attachments; but the nervous power by which their contractions were excited and controlled, remained the same. There evidently existed, therefore, some further sympathy between the two muscles respectively, dependent upon their integrity; and this ceased as soon as their attachments were destroyed, and will, I have little doubt, be restored when they have formed new insertions to the sclerotic coat.

There are two causes, therefore, to which we may ascribe undue contraction of the external recti muscles, when the eye is liberated at its internal periphery, and this untoward circumstance supervenes.

When it happens in the eye that is the subject of operation, we may presume it to be owing to the abductor having acquired unusual power during the continuance of the obliquity, and exerting that power as soon as it is at liberty to do so; in such case it will cease when the acquired energy ceases to exist, or the antagonising muscle becomes reunited to the sclerotica. When it occurs in the opposite eye to that which has been the subject of operation, it proceeds from the destruction of that restraint which the abductor derived from its nervous connection with the adductor of the opposite eye; the third and the sixth pair of nerves mutually influencing and controlling each other in the simultaneous lateral motion of the eyes; as already stated, if we consider the connection between the third and sixth pair of nerves anatomically, we shall find it to be in reality extremely intricate and complicated, and, as would now appear, for a very evident and important reason.

The third nerve (motor oculi) and the sixth nerve (abducens oculi) both arise from the track of the fibres of the corpus pyramidale (tractus motorius); these fibres are continued through the pons Varolii into the crus cerebri; so that, although the sixth nerve issues from the brain, at the upper part of the corpus pyramidale, and the third from the crus cerebri, they may be considered, in point of origin and function as a single nerve, merely separated by the breadth of the pons Varolii.

In addition to this identity of origin, the third and sixth nerves communicate very freely in the cavernous sinus by means of the carotid plexus, and indirectly through the medium of the ciliary ganglion, carotid plexus, and superior cervical ganglion of the sympathetic nerve. The first of these communications is established between the inferior division of the third nerve which supplies the internal rectus muscle and the ciliary ganglion, the last between the sixth and the superior cervical ganglion, while the carotid plexus is the bond of communication between both.

But there are other causes of failure of which it is of the utmost importance that the surgeon should be fully apprised, previous to subjecting his patient to operation, that his sanguine expectations of success may not be disappointed, and his prognosis belie his practice. When, during childhood, the eyes have been repeatedly affected with strumous, or other inflammation, of which, in the absence of more positive information, we often perceive evidence in the existence of nebulæ and specks on the cornea, we may find the whole of the muscles and investing cellular tissue of the eye so extensively adherent to the sclerotica, that it would be imprudent to detach them to the extent necessary to liberate the globe in a sufficient degree to admit of its assuming the proper position, even where the rectus and membranous attachments on the exterior of the organ to have escaped the ravages of the disease, but which, under such circumstances, seldom happens. When, then, we find the motions of the eye very limited, and that the patient is incapable of bringing the pupil by an effort of his will to the centre of the orbit, having previously suffered inflammation either during childhood, from accident, or other causes, we should consider well the probable degree of success before we operate. I have met with a few examples of this description in my own practice, and have witnessed several in that of other surgeons; in one instance, a man operated upon in Nottingham on one eye, by my friend, Mr. J. N. Thompson; and, on the other, by myself; the whole of the investing structures of the inner periphery of the eye were found to be thickened, contracted, and infiltrated to such a degree, that they cut like cartilage, and required both extensive and careful dissection from the sclerotica.

Fortunately, the mischief was confined to the inner portion of the sclerotic surface, so that when the eye was liberated at this part, the external muscle had power to draw the pupil into its proper situation, and the case did well. This man had two small specks on the one eye, and a nebulous opacity on the other. Notwithstanding this disadvantage his vision was very much improved by the operation, as his eyes were previously buried in an unusual manner in the nasal canthus; from which position he could move them but in a very slight degree, being only able to bring the pupils, by the greatest effort of the will, to a point scarcely midway between the inner canthus and the centre of the orbit. His sight was defective, I imagine, not only because he could not see any object he looked at with both eyes at the same time, but because it was difficult for him to turn the eyes sufficiently outwards to admit of the object being depicted on the sentient part of the retina, destined to transmit visual impressions to the sensorium. May it not happen, also, when strabismus is very marked, and the eye confined, as in this example, that the optic nerve suffers inconvenience from being slightly bent on itself, partial amaurosis being a frequent attendant on squinting?

I afterwards operated upon a lady, whose right eye was turned so much inwards, that it was with difficulty she could draw the pupil from the nasal canthus; this patient had been twice couched for opacity of the lens in this eye, and had on each occasion suffered from severe inflammation. The position of the eye, as the motions of the globe were very limited, prevented her from benefitting by the couching to the extent there was reason to believe she might do, could the organ be set at liberty. She informed me that the obliquity of the eye

had been considerably increased, and its freedom of motion much diminished by the inflammatory attacks she had experienced. I found the same amalgamation of muscular, tendinous, and cellular tissue in this case, that I have already described.

After the operation the abductor could not turn the pupil outwards, though it was able to draw it by an effort of the will to the centre of the orbit, and gradually in the course of a few days it acquired considerably more power. From which it would appear that the muscle was not only bound down by morbid adhesions, but had also been kept on the stretch for so long a time that it had lost its contractile power; and that it was from this state of preternatural tension only that it recovered, just as the muscular fibres of the bladder lose, *pro tempore*, their contractile power when this viscus has been over-distended by retention of urine.

Although only partially successful, as was anticipated, my patient was much gratified by the operation, as she suffered very trifling inconvenience from it, and it materially improved her sight; indeed in a much greater degree than could be expected, considering that the eye was deprived of its lens.

The fact of the external muscle requiring time to recover the contractile power, of which it would seem to be deprived by long-continued extension, I have frequently witnessed, and always found in such case that the patient was unable to bring the pupil to the centre of the orbit previous to operation.

A remarkable example of this occurred to me at Derby, when I was assisted by Mr. Douglas Fox, Mr. Wright, Mr. Godwin, and other surgeons of that town, who very kindly procured a large number of patients for the purpose of aiding in making the present observations. In the case alluded to, the woman was unable to turn the pupils sufficiently towards the centre of the orbit, to expose the whole of the cornea to view. Both eyes were liberated by operation, but a considerable time elapsed before the pupils approached their proper site. They did so, however, as much as could be expected, before she left the room; and the case has since, I am informed by Mr. Fox, improved in a remarkable degree. She was almost entirely amaurotic before the operation, and recovered her vision so as to distinguish small objects within an hour afterwards. About ten days ago I operated on a similar case, and a week elapsed before the pupil was restored to its natural site.

Another cause of failure, and one of much more importance than any yet discussed, is paralysis of the abductor or adductor muscle. I have not seen a case exemplifying the former, but can readily imagine the possibility of the occurrence, because I have seen three cases of the latter. In one of these, unfortunately, the tendon of the external rectus was cut by a friend of mine in the country; the case being at first regarded as an example of contracted abductor. It proved, however, to be the contrary, paralysis of the internal rectus. This might have been discovered before the operation, had the surgeon been on his guard, because there were other evidences, such as slight ptosis and impaired volition, as regarded the movements of the eye inwards, sufficient to point out the true nature of the case.

I have at present a very remarkable case of paralysis under my care, in which the eyes are both turned outwards, the left completely, although the loss of muscular power in the limbs is on the right side of the body. The affection of the eyes occurred at the moment of paralytic seizure, and singularly enough, as in the above case, is limited to the adductor muscles.

Another cause of failure is want of judgment in selecting the cases of strabismus that are proper for operation. Unfortunately, such is the mania for this operation, that all who squint are deemed proper subjects for the test of surgical skill. But there are numerous examples, in addition to those I have indicated, that ought not to be treated by this means.

A girl was shown to me who had been operated upon, and whose eyes afterwards turned spasmodically in every possible direction. On inquiry, I found she had twice suffered from chorea, and that the squint was a sequela of that disorder. At times, for weeks together, no obliquity of vision was perceptible; the affection would then recur, and continue for an indefinite period. Her eyes were very unsteady; and it was quite evident that these relapses were local returns of her former ailment, dependent, in all probability, on disordered bowels, temporary mental, or other irritation. The treatment in this instance should have been medical; and so it should be in all cases which we are informed are intermittent, and seem to depend on cerebral or gastric disorder, teething, convulsions, vermination, or acute disease. The permanency of strabismus should be well established before any operation is had recourse to. When not congenital, the disorder is no doubt, ninety-nine times out of a hundred, a sympathetic spasmodic affection, more or less evanescent or intermittent in its nature, and should for a length of time be regarded as such.

The period at which it may be viewed in any other light, will, of course, vary in different individuals, and must be dependent on a multitude of circumstances, of which every practitioner is capable of judging, when once his attention is directed to the subject, and which therefore need not be insisted on in the present remarks.

14, Langham-place, Regent street,
September 15, 1840.

THE LANCET.

London, Saturday, September 26, 1840.

Mesmerism, the infant which one of the surgeons of the Middlesex Hospital dandled with maternal fondness, expired, it may be recollected, in his arms, at the moment he was holding it up in triumph to the readers of the "Medical Gazette." A few "natural tears he shed;" and, though The Lancet contained its funeral oration, its history and affecting epitaph are now probably quite forgotten. The French Mesmerism has lived longer; but the end of its existence is fixed for the 1st of October, by the Academy of Medicine. The newspapers state, that Dr. Elliotson arrived at Hâvre on the day that a Dr. Laurent was performing "experiments" thereon in that sea-port; his programme stating that, among other miracles, the Hâvre Okey was to be converted into a *magnetic mirror*, in which the person *en rapport* would distinctly discern her features, and go through all the routine of the toilet, without let or hindrance. The papers do not state that Dr. Elliotson is to "assist" at the obsequies in Paris, but we should be willing to learn that that is the case; and that, like the enmity of France and England, the worthy Doctor's credulity is to be buried in the silent tomb; while some Astolfo brings the bladder, distended with his wits, back from the moon.

The following are the circumstances attending the last trial which the ineffable absurdity is ever likely to receive in the French Academy of Medicine. M. Double was the reporter. The Academy received some time since a letter thus expressed:—

"Mr. President, I have the honour to inform the Academy, that I can exhibit before it a somnambulist, with such a magnetic lucidity, that she can read through a pasteboard, or wooden box, and without the use of her eyes.

(Signed) Teste, D.M.P."

MM. Chomel, Dubois, Gerardin, Louis, Double, the Magnetic Commission, accepted the invitation of Dr. Teste at their earliest convenience. M. Double had various boxes made, and upon a side of the one they used were six lines, in a "magnificent" letter; they were taken from a versified translation of an oration in Sallust. The Commission agreed beforehand to state the sense of the passage in general terms. Dr. Teste had a box, but the Commission preferred their own. The somnambulist soon arrived; she was young, fresh, and full of grace,—"agreeable in every point."

Fifteen *passes* threw her into the mesmeric sleep: Can you read? said Dr. Teste. I will read in ten minutes, she replied. Silence reigned in the room; and the conviction and confidence of the mesmerist and somnambulist seemed so strong, as to make matters look absolutely awful in the eyes of the Commission. After waiting ten minutes the somnambulist began to turn the box in all directions. M. Double goes on to say, that she tore a corner of the white paper (no doubt unintentionally) which was sealed upon the box. He pointed this out to Dr. Teste, who forbad her to do so. A quarter of an hour elapsed, and she never uttered a single word; she seemed embarrassed, which must, of course, be ascribed to the action of the magnetic influence: at last fixing her eyes upon the box, but precisely upon that side on which there were no letters, she said stammering, "We are." That was all. They waited half an hour longer in vain; one of their colleagues left, but the Commissioners were determined to remain to the end, and to compel the mesmerist to admit he was beaten: they then opened the box, and he was shown not only that his somnambulist had not read the verses, but that she had not fixed her eyes on the spot where they were placed.

The reporter concluded in these emphatic terms—"Gentlemen, we have performed "our task patiently and conscientiously; M. "Burdin's challenge has been up a year, and

"the result of all our experiments has been "the same as that which I have communi- "cated to you. Is it not time, to spare the "hours and patience of the Academy, to turn "a deaf ear to these charlatans, and to de- "clare the proposition of M. BURDIN a "'dropped order of the day'" (*non arcane*)?

With the greatest deference for the French Academy of Medicine, we must say that the question of M. DOUBLE should long ago have been answered in the affirmative. The Academy has sunk considerably in the eyes of Europe, by keeping the piece of quackery afloat so long, and being so slow in coming to a decision, with its solemn select committee of a year's duration. The dreams of inmates of Charenton, or the theory of thimble-rig, would have occupied a Commission more profitably. LOUIS and CHOMEL to be requested to prove, by a year's investigation, that mesmerism is arrant humbug! The joke is too grave. M. DOUBLE was reminded that the time fixed by BURDIN himself would terminate Oct. 1st, 1840, and he withdrew his motion,—after some severe denunciations of the "roguery" (*friponnerie*) of the traders in mesmerism, by GERDY, heard with general marks of approbation,—and a good deal of ridicule, in speeches by BOUILLAUD and ROCHOUX, which excited "prolonged hilarity." The thing is now ended in Paris; and, as the city is to be fortified, let us hope that mesmerism will never again be allowed to show its front within the walls, or at least to waste the time and exhaust the patience of a "Commission."

THE *North of England Association* has held a successful meeting in Carlisle, to the report of which we refer our readers, and request their particular attention. Dr. HEADLAM, of Newcastle, who occupied the chair, opened the meeting in a sensible reform speech; and Mr. T. C. CARTER, the Honorary Secretary, read the Report, which is replete with sound views, and, although we may not agree with every part of it, is alike creditable to the judgment and energy of the "men of the north country." The same remark will apply to the speeches of Dr. HEADLAM, Dr. BARNES, Mr. MORRISON, Sir JOHN FIFE, Mr. IRVING, Mr. POTTER, Dr. KNOTT, and Dr. TORBOCK.

Dr. ELLIOTT, of Carlisle, read a paper "On Scientific Medicine, and its Relations to and Claims upon Society at large," which he had prepared at the request of the Council. The address is to be printed by the Association, and we shall then have an opportunity of making our readers fully acquainted with its contents. His remarks on Vaccination, the Poor-Law Commissioners, and the *Halls*, express the views of the great body of medical practitioners in the north of England.

"The superintendence of the effectual and ready extension of Jenner's valuable discovery to every home in the land, has lately been committed, over the heads of those to whom it belonged, by every title of production, of right, and of reason, to the Poor-Law Commissioners, whose original jurisdiction did not at all include many districts now subjected to them, in their new capacity of Comptrollers of Public Vaccination. And this has been done, too, while there already existed a National Vaccine Establishment, with a complete and rather expensive staff, paid out of the national exchequer, and under the direction of the President of the College of Physicians. Now, assuredly, no consideration can justify the infliction of these and similar wrongs on a noble and learned profession, by a liberal and enlightened Government, in the nineteenth century. But what judgment remains to be passed upon the culpable remissness of nearly a score of medical incorporations, that would forbear, in this or any age, to vindicate the rights of the profession at whose head they nominally stand, or on the conduct of the College of Physicians, in the particular instance just cited."

* * *

"The incorporated Halls, and nominal superintendents of Physic, Surgery, and Pharmacy, in this country, are NOT *bonâ fide* representatives of the profession. They embrace not *the principle of representative government*, so *especially* applicable, in the case of learned associations and professions (as of all methods the best calculated to insure the selection of the best men). The three Halls in England have, in consequence, interests and objects too far from being identical with those of the profession, to induce or even to allow them to co-operate with it in great measures

of general medical improvement. Neither have they interests nor objects in common amongst themselves. Thus, one of them succeeded, in 1815, in procuring the enactment of a law that involves the twofold evil of vexatiously coercing, without any exception, the licentiates of the other Halls; albeit that it, in common with every other, passes over with impunity the totally unqualified dabbler in medical practice, in surgery, and in drugs."

The progress of Medical Reform will be hailed by the student, as he may rest assured that it will not only protect him from oppression and injustice, but offer scope to the exercise of his talents, and raise the character of the profession which he is about to enter. With all the generous courage, candour, and confidence of youth, the medical students of the country will place themselves in the ranks of Medical Reformers, in the struggle to advance science. They have none of the rusty prejudices of age; and selfishness has not obliterated in their hearts the eternal principles of justice. They have nothing to gain by the monopolies of hospitals; the impunity of professors; the self-elective councils, which are ready to take their money, vex them with absurd regulations, and call them members, but refuse them the power, influence, and protection, to which they have an indisputable claim.

The controversy relating to the new Coroner for Cheshire is carried on with some zeal, though not altogether with the ability that might be expected, in the newspapers of Cheshire. The appeals, for instance, to the freeholders, in favour of the election of a candidate who has received an education in medicine, do not consist of illustrations, abundant and forcible as they are to be found, ready to the hand of the industrious and intelligent collector, exhibiting the necessity of having a *medical* president in a court in which death and disease, in all their shapes and varieties, are the chief topics of inquiry; but almost wholly of criticisms, rejoinders, and discussions on the paltry expense of travelling to distant inquests—straining to justify, or oppose, the appointment of a candidate who lives so or so many miles from a particular extremity of the county. Why, in the western division of the county of Middlesex, which division is 26 miles long by 25 miles broad, at its extremities, where the Coroner travelled in one year, Feb. 1839 to Feb. 1840, on his road to hold inquests, 3137 miles (and as many miles, nearly, back again), the charge to that wealthy and populous county for mileage on those inquests amounted to less than £120. Now the average number of inquests taken in *all* Cheshire in the four years ending Aug. 31, 1839, by Mr. Hollins and Mr. Thomas (including also those under the Halton Fee, by Mr. Caldwell), amounted to only 415 inquests a-year. The half of these, say 208, will compare with the inquests taken in one year in the *western* half of Middlesex, presenting a ratio of rather more than 1 to 4. If it *should* happen, which cannot, however, even be guessed to be possible, that to choose an attorney candidate instead of a medical man, would lessen the charge for mileage to Cheshire one-half, in consequence of the position of his place of residence, the average amount of saving per year to that luxuriant county—a land flowing with cream, and bubbling with the richest cheese,—would amount—there being three Coroners—to as nearly as possible £9 14s 7d a-year; about the sum that would buy a week's skimmed milk for Eaton Hall. And for this imaginary bribe, a few Judas Iscariots would sell the appointment to a Coroner who, probably, could not tell a dead body from a living one at the first inquest he might hold. This is to strain at gnats and swallow camels!

By-the-by, why are there in the field *two* surgeons to divide and render nugatory the medical interest?

At a meeting of the Limerick Medical Association, Dr. Griffin recently read a very interesting Report on the form of Registers to be kept at Dispensaries, in order to indicate the state of public health. For

his purpose it is not necessary, but for others, it may be useful to state the duration of the case previous to the patient's application. By adopting Dr. GRIFFIN" suggestions, keeping correct registers, and preparing annual abstracts on a uniform plan Irish surgeons may throw much light on the diseases, and promote the health of our fel low-countrymen in that island.

MR. WARBURTON'S "MEDICAL REFORM."

SINCE the "PREFACE" was written, in the early part of the week, we have been favoured with a copy of Mr. WARBURTON'S MEDICAL REFORM BILL. It did not reach us until Wednesday evening, and we have had some difficulty in preparing an analysis of its contents for the present Number of our work. We offer, on the present occasion, NO comment on any portion of the measure. We may state, however, that the opinions which we have expressed in the preface, and on a thousand other) occasions with reference to the principle and the chief provisions of a Medical Reform Bill, remain entirely unchanged. The present Bill is indorsed on the back, "MEDICAL PROFESSION BILL," and contains within the following title:—

"A BILL

For the Registration of Medical Practitioners, and for establishing a College of Medicine, and for enabling the Fellows of that College to practise Medicine in all or any of its Branches, and hold any Medical Appointments whatsoever, in any Part whatsoever of the United Kingdom."

It consists of 59 clauses, occupying 34 pages (nearly 1500 lines of folio print), and therefore cannot possibly find, at this late hour, a place among the contents of our num ber, but we at once impart to the profession a knowledge of its PREAMBLE and enact. ments.

The PREAMBLE, which is very brief, runs thus:—

"Whereas, it is expedient that all male "persons practising medicine in the United "Kingdom should be REGISTERED; and that "all properly educated medical practitioners "should be *encouraged to exercise their pro-"fession*, in all or any of its branches, in "whatsoever part of the British dominions "they may severally think proper to exer-"cise the same, and should be empowered "to hold *medical appointments*, of whatsoever "description, in any part of the said do-"minions."

I. The clauses of the Bill are then prefaced by an "interpretation clause," in which are explained the "meaning" of several terms that are peculiar to the Bill, that is to say, the following words:—

"Persons practising medicine."
"Medical practitioner," or
"Person practising medicine as principal," or
"Person practising medicine in chief."
"Firm practising medicine."
"Party practising medicine in chief."
"Assistant."
"Medical assistant," or
"Assistant practising medicine."
"Domicile (as applied to a medical practitioner, or a firm practising medicine)."
"Name (as applied to a person or a firm)."
"Medical qualification," and "Qualifi cation," &c. &c.

The only terms amongst these of which we need subjoin the explanations, are the following:—

Person practising medicine.—A male person who, with a view to the private gain of himself, or another, himself administers, by whatever method of treatment, *to the relief or cure of any human bodily injury or malformation*; or *human ailment*, bodily or mental, real or imaginary; or who, with a like view, *advises or prescribes* what method of treatment shall be administered by another; or who, with a like view, employs another to act in the like manner; or who makes or issues any public manifestation, notice, or advertisement, to the effect that he will act as aforesaid.

Medical assistant.—A person who, for private gain, engages himself to a party practising medicine (in chief*), and is employed by that party to practise medicine, and shall not be construed to extend to a pupil or apprentice of a party practising medicine in chief.

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* That is, a practitioner who is not an assistant.

Medical qualification.—As applied to a person practising medicine, these words shall imply that he holds one or more of the following qualifications. (Here are enumerated in the Bill the subjoined titles and documents.)

1. The degree of M.D. or M.B. in some university of the United Kingdom, or a licence therefrom to practise medicine.

2. The mastership in surgery from some such university.

3. The certificate of proficiency in surgery therefrom.

4. The fellowship, membership, or candidate or licentiateship of some college of physicians or surgeons, or the possessorship of a diploma received therefrom, or of or from some faculty of physicians and surgeons in the United Kingdom.

5. Or a membership or licentiateship of some society of apothecaries, or the possessorship of a certificate of fitness to practise as an apothecary received therefrom.

6. The term also embraces persons who hold any medical commission or warrant in the British army or navy, or the East India Company's service.

7. And all those persons who may become fellows of the college of medicine directed in this Bill to be hereafter established.

8. And all persons who were in practice as apothecaries prior to August 1, 1815.

The clauses then proceed to declare as follows:—

II. The costs of administering the Act shall be paid by an annual tax of [*blank in the bill*] on every registered or unregistered medical practitioner in the United Kingdom, according to the provisions of the bill, forming the fund of a "Medical Registry Account." Any deficiency to be specially supplied by Parliament.

III. From and after 1842, registers of all persons practising medicine (in chief) in England, Scotland, and Ireland, shall be made and kept by three persons, nominated by the Secretary of State for the Home Department, whose offices shall be respectively situated in the three capitals, having the registrars of births and deaths throughout England, certain schoolmasters in Scotland, and officers of the police in Ireland, as sub-registrars.

IV. V. These clauses describe the duties of the sub-registrars, and require the medical practitioner to supply to them a schedule of name, address, branch of medicine, and nature and dates of his qualifications; "but," says the clause, "if he do not hold "a medical qualification, then whether it is "as being a chemist and druggist that he "practises medicine in chief," and if under the Apothecaries' Act, or a right acquired by usage before that Act was passed; "or "whether he practises medicine in chief "without either holding a medical qualification or being a chemist and druggist." Each partner in a firm to do the same.

VI. VII. VIII. All this to be signed, returned before the 1st of April, 1843; or if no blank schedule to be filled up has been sent to the party by the sub-registrar, then the party must, before the 7th of April in every year, apply for one, to fill up and return, the sub-registrar being required to comply with the request speedily afterwards. The period and demand for such returns from medical practitioners are to be publicly advertised also. These returns are to include the names, addresses, and qualifications of "parties who practise medi-"cine in chief in their capacity of chemists "and druggists," as well as "parties who "practise medicine in chief, and are not in-"cluded in the division of persons who "hold medical qualifications, or who do not "practise in the capacity of chemists and "druggists."

IX. The registers are to be printed and published *by the registrars* afresh on the 1st of August in every year, so far as regards those persons who hold what is termed in the Bill a "medical qualification."

X. Permission is given to the *Secretary of State* to publish or not, as he may think fit, the two divisions of persons who "prac-"tise medicine in chief in their capacity as "chemists and druggists," and those who "practise medicine in chief without being "included in either of the preceding divi-"sions."

XI. Any one may reprint registers.

XII. Medical practitioners may "require" any person who has returned himself in a schedule to prove the actual existence of his alleged qualification.

XIII. Persons not holding a "medical qualification" shall not hold any medical office in any public institution, or any district, parochial or otherwise, benefit society, or in either of the public services.

XIV. XV. XVI. The registry of a person to commence with the date of his "return." Changes of residence to be notified to registrars, and announced in supplements to the registers.

XVII. After the 31st of July, in the year 184—, *it shall not be lawful for any unregistered person*, "even although he hold a medi-"cal qualification, *to act as a medical practi-"tioner in any part of the United Kingdom*, "any custom or thing contained in any "statute, charter, gift, grant, or deed, or any "by-law, regulation, or statute of any cor-"porate body, to the contrary notwithstand-"ing."

XVIII. The possession of a "medical qualification," by a person whose name shall appear in the registers or supplements, which *the registrars* are to be required by law to publish, shall render it lawful for him "to "make any reasonable charge for any time "he may have employed in professional at-

"tendance on any patient *in that part of the "United Kingdom in which he is registered,"* and therein to sue for the same.

XIX. "Three medical councils, one for "England, one for Scotland, and one for "Ireland," shall be constituted, each to consist of 36 councillors, of whom, 12 shall be non-medical men "nominated and appointed," on the 1st of October, 1843, by the Secretary of State for the Home Department for the time being. Of these 12, there shall 3 of them annually, on Oct. 1st, vacate, at the bidding of the Secretary of State, their office, to be replaced by 3 other non-medical men, similarly nominated. The 24 other councillors shall be elected by those registered "medi-"cal practitioners in each respective country "who hold a medical qualification," and shall be chosen, exclusively, from among the qualified electors themselves. The first of these elections to take place in the middle of September, 1843, and the registrar of each country to be on that occasion the scrutineer of the election. For the year 1844, the scrutineers to be chosen by voting-papers, by the electors, from amongst the electors. The 24 councillors to be elected in a similar manner. The voting-papers to be prepared by the registrars, and circulated by the sub-registrars, to be filled up by the electors, severally, and returned, sealed, to the sub-registrar, to be by him conveyed by post to the registrars in the respective capitals of each country, the votes of the electors to be kept secret by the registrars, they each reporting to the Secretary of State on whom the choice of the electors has fallen.

XX. Of these 24 elected medical councillors, 6 shall annually, on each 1st of October, vacate their seats, by decision of the said medical electors pronounced a fortnight previously; and who, from amongst their own body, shall replace those 6, the metropolitan registrars, and the previously elected scrutineers, presiding in each capital at the estimate of the votes, having, on the 1st of August before, named an umpire between them. (This clause also directs that the 36 councillors shall indicate, by lists, to the electors before each election, which 6 of the medical councillors they would "recommend the electors to cause to vacate," and whom "to elect, as six new councillors;" but that the electors may either reject or comply with this "recommendation," as they may think fit.)

XXI. The three metropolitan councils each to elect its own chairman, by ballot, annually in October. At meetings of the councils, 6 to form a quorum. Decisions therein to follow the majority of votes. Minutes of their proceedings to be kept, printed and circulated amongst themselves and the other metropolitan councils, and open to a senate hereinafter mentioned, and the Secretary of State.

XXII. Of these three councils of 108 persons, 12 members are to be annually chosen from each council to form a united *Medical Senate* of 36 persons. Of each 12, four persons are to be chosen from the non-medical division.

XXIII. This "Medical Senate of the United Kingdom," is, on the 4th of October in each year, in and after 1842, to meet in London, at a place named by the Secretary of State, and choose annually a president. Its proceedings to be conducted like those of the councils.

XXIV. V. The senate may make by-laws, to be laid before Parliament, for its own regulation, and to be binding also on the aforesaid councils, "and on all fellows and "matriculated students of the college herein-"after directed to be founded, and on all the "examiners appointed by the said several "councils, and on all the officers and ser-"vants of the senate or of the said several "councils."

XXVI. VII. The councils may make regulations for giving effect to the by-laws of the medical senate; which regulations, however, the senate may subsequently disallow.

XXVIII. The senate may attend all meetings of the councils, and take part in their discussions; or attend the courts of the "Examiners."

XXIX. There shall be founded a "College of Medicine of the United Kingdom." Its "first fellows" shall consist of all the elected medical councillors of Oct. 1, 1843; and its future additional fellows shall be constituted of the like councillors for other years, all to be fellows for life; together with such other registered persons, possessing "medical qualifications," as the senate may, by by-laws made by the senate, pronounce to be eligible for election as fellows of the said college.

XXX. This senate shall, on commencing its duties, make by-laws to define what "medical qualification," possessed by a medical practitioner, shall entitle him to claim to be a fellow of the said college, without subjecting him to an examination in medicine. The before-mentioned councils shall "make regulations for carrying such by-law into effect;" and when any person so qualified shall apply for admission to the fellowship, the said council shall ballot for him, and reject or admit him according as the majority of their votes may decide.

XXXI. Persons not already in medical practice may be admitted to the fellowship upon examination, as follows:—The said senate shall make by-laws to define "the "*examinations*, to which all persons claim-"ing to be entered in the books of either "of the councils, as *matriculated students of* "*the said college*, shall, previously to their

"being so entered, be subjected," and the age they shall have attained, and "touching "the *course of instruction* to be pursued by "students *subsequent* to their matriculation, "and touching the medical *institutions* and "*schools*, corporate or unincorporated, in the "United Kingdom or in foreign parts, which "shall be deemed *competent* for *the instruc-"tion of students in medicine*; and touching "the *registration* of matriculated students "during their course of instruction; and "touching the *age* which persons admitted "to examination for the fellowship of the "said college shall be required to have "attained;" and touching the *examiners* whom the several councils shall have appointed, and touching the times and modes, and subjects of medical examination. And the said senate may "relax the rigour of "such by-laws in favour of those students "whose course of medical instruction may "be advanced towards completion when "those by-laws first come into operation." The *councils* are to *appoint the examiners*, who are "to examine persons claiming to "be entered in the books of the council "as matriculated students of the said col-"lege." And also appoint the examiners of candidates for the fellowship of the said college. The examiners are to report to the council what candidates they pass, and then such candidates shall be entered or admitted as matriculated students or fellows, as the case may be.

XXXII. The senate may empower each of the council "to ballot for the *expulsion* "*from the college* of any fellow thereof do-"miciled in the country to which such coun-"cil belongs, who may have been tried for "and found guilty of committing any infa-"mous crime or offence."

XXXIII. Any fellow of the college may, at his own request, be examined by direction of the senate, as a candidate for a certificate from the council, certifying his proficiency in medicine, or surgery, or midwifery, or pharmacy, or some other special branch of practice.

XXXIV. No councillor can be an examiner.

XXXV. It shall "be lawful for every "fellow of the said college to practise as a "surgeon-apothecary, or general practi-"tioner of medicine, in any part whatsoever "of the British dominions;" or in the same capacity to any hospital, gaol, union, society, or other public place or body; and "to compound and dispense any medicine he may prescribe for his own patients," any where; and to sue for charges for medicine, operations, or attendance; and to receive any number of pupils or apprentices; and every such fellow shall be entitled "to all "exemptions from serving on juries, in-"quests, &c., and all other exemptions to "which surgeons or apothecaries are already "entitled."

XXXVI. Fellows of the said college "who shall have received from any such "council a certificate" of his proficiency in medicine, and "who shall also be a graduate in medicine in any university in the "United Kingdom," shall, in addition to his other before-mentioned privileges as a fellow of the said college, "be also entitled "to practise as a physician in any part of "the British dominions, and to act as a phy-"sician to any hospital," &c., "or, after un-"dergoing such examination as any duly "constituted medical board may deem re-"quisite, may serve as a physician in the "navy or army, &c., and be entitled to every "already existing privilege of a physician."

XXXVII. This clause makes a similar declaration with regard to *surgeons*, who are fellows of the said college, giving them, on obtaining an examination, a certificate of proficiency in surgery from one of the said councils, and already possessing a surgical qualification from some other college, or faculty, or university, entitling them to "act "as surgeons in any part of the British "dominions."

XXXVIII. The same as regards a fellow of the said college who may have received from one of the councils a certification that he has, on examination, "been found to be proficient in the art and business of an *apothecary*;" if, also, he be "a member, or licentiate, or "certified proficient of some society of apo-"thecaries of the United Kingdom, or of the "Faculty of Physicians and Surgeons of "Glasgow, or of the Royal College of Sur-"geons of Edinburgh." Such apothecary may act as an apothecary anywhere in any part of the British dominions, &c.

XXXIX. "Fellows of the college who "have received a certificate of proficiency "in *midwifery*, may act as *surgeon-apothe-"caries*, or, if they be graduates in physic, "as *physicians to any lying-in hospital* in any "part of the British dominions." (*Marginal note.*)

XL. Fellows of the college who have received a certificate of their knowledge of the treatment of *lunatics*, may act as surgeon-apothecaries, or, if they be graduates in physic, as physicians to any lunatic hospital or asylum in the British dominions.

XLI. The senate may, if they think proper, under by-laws, purposely made by them, exempt any candidate for the fellowship of the college from the examinations, or from any part of the examinations, which such candidate would be liable to undergo before admission, if that candidate have already acquired "a medical qualification" in the United Kingdom, or a degree in medicine in some university abroad, of which the said senate may approve. The council to which he may apply shall then ballot for the admission of the said candidate.

XLII. Chemists and druggists may voluntarily apply to be examined by exa-

misers named by the said senate. Their examination "shall relate to the Latin language, the interpretation of prescriptions, "the pharmacopœia, the articles of the "materia medica, the quantities of different simple or compound medicines which "may safely be administered to patients, "chemistry, practical and pharmaceutical, "and botany." To every person passing this examination the council shall grant a certificate of proficiency therein; and if such person desire a registrar to register him in a certain annual list of certified chemists and druggists, he shall be so registered. And "any person so certificated "shall be entitled to carry on the business "of a chemist and druggist in any part of "the British dominions." And "if any "person so certificated shall carry on the "business of a chemist and druggist in any "town, the population of which" amounts to —— inhabitants, then "the laboratory "or shop of such person shall be approved "of as a *school for pharmacy* by each of the "said medical councils."

XLIII. Every student "shall be deemed "to have completed a proper course of in-"struction in *pharmacy*," who shall have attended such laboratory or shop, as abovementioned, or any apothecary's or hospital, or medical practitioner's shop or laboratory, *recognised* by the medical council of the country, during a continuous period of not less than —— years or months; a longer or shorter period for either kind of shop or laboratory as the by-laws of the said council may demand.

XLIV. The said senate may prepare and publish a national *pharmacopœia* for the use of all medical men,

XLV. All *medical assistants* in England, Scotland, and Ireland, to be *registered* from January 1, 1845, by means of a form, to be called "The Medical Assistant's Notice and Schedule," recording their name, age, address, medical qualification (if any), and those of the medical practitioners to whom they may be assistants. And when the annual registers of the medical practitioners of the country are published, those registers shall respectively contain, in juxta position with their names, those of the medical assistants whom they may severally be at that time employing.

XLVI. All *medical students* in the United Kingdom, who intend to obtain, by and by, a "medical qualification," are to be *registered* by the parties with whom they may be apprentices or pupils,—dates, ages, family domiciles, the hospitals, or medical schools they may be attending in that twelve months; the specific courses of lectures and demonstrations they may be attending; the name of every professor, lecturer, demonstrator, and the date and duration of their attendances on the instructions of those persons; and all professors and teachers in every university, college, school, hospital, or dispensary, in the United Kingdom where medicine is taught, are to assist by the registrations of their pupils in rendering this registration of pupils and their studies complete.

XLVII. No part of any course of medical instruction, excepting that for which a student shall have been *registered*, shall be allowed by the senate to qualify the student for *admission to examination*.

XLVIII. If any medical student be *studying* "*in foreign parts*," with the intention of becoming a candidate for examination as aforesaid, "no part of any such foreign course of instruction shall" qualify him to be admitted to such examination, unless he *once a quarter* sends notice thereof, with full particulars (certified by the foreign teachers), to one of the registrars at home.

XLIX. The registers may be searched on payment of a fee named by the Secretary of State.

L. The fees demanded by the senate for examinations and admissions to the fellowship of the said college, must first be approved by the Secretary of State.

LI. The number of clerks of the said councils, senates, registrars, and all the salaries and emoluments under this bill to be fixed and regulated by the Lords of the Treasury.

LII. to LVII. These clauses relate to *penalties* (the amounts not named in the bill) to be levied on *sub-registrars* for neglect, defaults, or falsifications; on persons for neglecting to make the required *returns;* on *medical practitioners* for refusing to receive return forms; on all persons for wilful misstatements in the schedules, and the appropriation of penalties to the "Medical Registry Account at the Bank of England."

LVIII. The rights, &c., at present enjoyed by all existing medical and surgical universities, faculties, colleges, and corporations, excepting so far as they may be altered and varied in and by this Act, are not to be lessened or prejudiced by anything contained therein, any more than if the said Act had never passed.

LIX. The Act to continue in force until Jan. 1, 1860, and no longer; but all fellows of the aforesaid college of medicine, who have acquired rights under this Act by or before that date, are to retain the same, just as if the Act had continued in force.

The Anatomist's Vade Mecum; a System of Human Anatomy. By W. J. Erasmus Wilson, Lecturer on Anatomy and Physiology, in the Middlesex Hospital School of Medicine; illustrated by 150 Engravings on Wood, by Bagg. London: 1840, J. Churchill, pp. 551.

The great and substantial basis of medicine is to be found only in a knowledge of

anatomy. To the surgeon and the physician the human frame should be as glass, through which the various vessels, the nerves, the organs, at any depth, may be perceived as clearly by the mental as the corporeal eye. What is it that gives confidence to the physician in forming his diagnosis? What enables the knife of the experienced surgeon to traverse the most delicate and highly-organised textures, without immediate risk or danger to the patient, and with the moral certainty of attaining the object of the operator? A knowledge of anatomy. Observe the profuse perspiration bursting from the forehead of that bungler; witness his trembling hand, the quivering knife, the desperate plunge, the fruitless efforts, often the fatal attempts, of the ignorant operator. What can be the cause of all this perturbation and distress? The neglect of anatomy. Observe the pallid faces of the sufferers who are retreating from the door of the ill-educated physician—the indications which they present of prostration of the vital powers, and of a melancholy suspicion of the attacks of that dreaded enemy of humanity, consumption, when a trifling gastric or hepatic irritation is the simple cause of the alarming symptoms. How does the erroneous diagnosis, in such cases, find its explanation? In the neglect of an education in anatomy. What carried the keen bistoury of Dupuytren into the very substance of the brain, to give exit to the pent and danger-working pus? A perfect knowledge of anatomy. To what is attributable the discovery and successful execution of all the splendid operations which have given name and character to the science of surgery,—the operations for preventing the fatal effects of fracture of the cranium and other bones,—for arresting the morbid course of the blood in the production of aneurism,—for liberating the incarcerated intestine in strangulated hernia,—for relief from calculi in the bladder,—in short, for all the other painful and dangerous injuries and maladies which it is the duty of the surgeon to ameliorate and cure,—what, but the study of anatomy, and a thorough acquaintance with the minute structure of the human frame? Lately have been achieved by anatomy yet greater triumphs for surgery in the successful division of tendons, the speedy and safe cure of distorted feet, the restoration of the misdirected eye in cases of oblique vision. A knowledge of anatomy, had its application been made at that time, would, most probably, have arrested in one of the noblest of our poets that bitter misanthropy which embittered all his life. But we must check the abundant illustrations which arise to the mind in contemplating the benefits and achievements of surgery by the aid of anatomy. The medical student at once, on his arrival in London, must regard anatomy as the groundwork of his future success, both in acquiring present information, and subsequently practising medicine; he must observe with precision and store with care every face that anatomy discloses to his view. He must early bend his steps to the dissecting-room, and there, with the key of industry, unlock the door, and possess himself of the rich stores which kind nature freely offers to him in the interior of the human frame.

As a companion in his attempts to master the difficulties and intricacies of anatomy, we present to his notice the truly exact, scientific, and valuable volume which is named at the head of this article. The "Anatomist's Vade Mecum" of Mr. Wilson is certainly the best manual of anatomy that has yet been presented to the profession, while, even in mechanical execution and pictorial illustration, it is one of the handsomest productions that the press has ever offered to the medical community. The more abstruse facts are further exemplified by a profusion of engravings, executed on wood, in the best style and most artist-like manner, and with an attention to correctness in detail which rarely distinguishes attempts to describe, by means of that branch of the art, the structures and organs of the human body.

Expressing our conviction of the superiority of this work, and the carefulness with which it has throughout been written, we shall not attempt to review its contents in detail, but will select from its pages a few passages to enable the reader to form some estimate of its merits as a literary production. The following brief but explicit description of the structure of bone, microscopically observed, may, at the same time, be new to many members of the profession:—

"In structure, bone is composed of lamellæ, which are concentric in long, and parallel in flat bones. Between the lamellæ are situated numerous small longitudinal canals and minute oval corpuscules. The longitudinal canals (canals of Havers) contain medullary substance and vessels, and communicate with each other, and with the medul-

lary canal or cells; they are surrounded by minute concentric laminæ crossed by radiating lines. In the extremities of long, in short, and in flat bones, the cells represent the Haversian canals, and are each surrounded by concentric laminæ, and the medullary canal of long bones may indeed be considered as a single Haversian canal exceedingly dilated. The oval corpuscules are miante cells, from which are given off a number of radiating and branching tubuli, which anastomose with the corresponding tubuli of neighbouring cells. The cells and tubuli are filled with calcareous substance; hence they have been named calcigerous cells and tubuli."

The development of bone is thus treated:

"The earliest trace of skeleton in the human embryo is observed in the existence of semi-opaque lines which are seen through the transparent embryonic mass. This trace is composed of a consistent granular jelly, and constitutes the *gelatinous* state of osteogenesis. In the second or *cartilaginous* state, the semi-opaque jelly becomes dense, transparent, and homogeneous, the change taking place from the surface towards the centre, and constituting *cartilaginification*. In the third stage, the cartilage is traversed by vessels carrying red blood, which proceed from the fibrous investment and ramify in its interior. The cartilage immediately surrounding these vessels becomes opaque and of a yellowish red colour. In the fourth stage, the earthy constituents are attracted from the blood by the opaque cartilage, which becomes altered in character, and shoots into the transparent cartilage in the form of reddish grey fibres, which communicate with each other at acute angles, and constitute an areolar osseous tissue. This is the state of *ossification*. The succeeding changes are those of condensation and the formation of cells, Haversian and medullary canals."

A subject of particular interest at the present moment will be found in the following description of the actions of the muscles of the orbit, from its application to the operation for dividing the internal rectus in strabismus:—

"The four recti, acting singly, pull the eyeball in the four directions of upwards, downwards, inwards, and outwards. Acting by pairs, they carry the eyeball in the diagonal of these directions, viz., upwards and inwards, upwards and outwards, downwards and inwards, or downwards and outwards. Acting all together, they directly retract the globe within the orbit. The superior oblique muscle, acting alone, rolls the globe inwards and forwards, and carries the pupil outwards and downwards to the lower and outer angle of the orbit. The inferior oblique, acting alone, rolls the globe outwards and backwards, and carries the pupil outwards and upwards to the upper and outer angle of the eye. Both muscles acting together, draw the eyeball forwards, and give the pupil that slight degree of eversion which enables it to admit the largest field of vision."

In the chapter on the organs of sense, the subjoined interesting description of the perspiratory apparatus of the skin occurs:—

"The *perspiratory ducts* are minute spiral tubes which commence in small lobulated glands, situated deeply in the integument, beneath the corium, and among the adipose vesicles. They are easily seen by examining a thin perpendicular section of the skin from the palm of the hand, with a lens of moderate power. Proceeding from the glands, the ducts ascend through the transverse fissure, between the quadrilateral masses of papillæ and through the rete mucosum, to terminate by open pores upon the surface of the cuticle. That portion of the tube which is situated in the cuticle, is pretty equally spiral; but that below the level of the papillary surface is very irregularly twisted, and is often nearly straight. In the scalp the tubes are serpentine, or but slightly curved."

We close our present notice of this work, repeating our cordial recommendation of the volume to the student of anatomy, and to all those who desire to remove "the rust" from their memory of that science, with the following short passage from the preface:—

"To the established practitioner it is a matter of great importance that he should be possessed of the means, during the few spare hours which he can abstract from his anxious and responsible duties, of easily and agreeably refreshing his acquaintance with that science which is the acknowledged basis of all safe and skilful medical practice. Of this application of my present labours I have not been unmindful, in composing the Anatomist's Vade Mecum; and I sincerely trust that the work will prove to be the instructive and interesting companion of his important practical avocations."

BRITISH MEDICAL ASSOCIATION.

Meeting of Council, Sept. 15, 1840.

Dr. WEBSTER, President, in the chair.

THE minutes of the last meeting were read and confirmed. Dr. Garratt Dillon was unanimously elected a member of the Association at a former meeting of the council. Several letters from correspondents, on the subject of Medical Reform, were read and referred to the Reform Committee.

A letter was read from Dr. Conquest, Finsbury-square, who liberally expressed

his willingness to become a subscriber to the benevolent fund of the Association.

A letter was read from Dennis Phelan, Esq., an Assistant Poor-Law Commissioner for Ireland, and one of the earliest corresponding members of the Association, in reply to one addressed to him by the President, in consequence of some remarks of Mr. Phelan to the medical gentlemen of Cork, implying a censure on a portion of the profession in England in connection with the Poor-Law question. The explanation given by Mr. Phelan was deemed satisfactory by the council, and showed that he had no intention of complimenting the profession in Ireland at the expense of their English brethren. The remainder of the evening was occupied in finally arranging the Anniversary Meeting, which, it was resolved, should be held at Exeter Hall, on Thursday evening, the 8th October, 1840, when the President will take the chair at a quarter before 7 o'clock precisely, for the transaction of the general business of the association, after which the annual oration will be delivered by Dr. Marshall Hall, F.R.S.

The meeting then adjourned to Tuesday evening, September 29, at half-past 7.

BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

Glasgow, Thursday, Sept. 17.

(The Medical Section met at Eleven o'clock.)

Dr. James Watson, President, in the chair.

Several reports were expected, but apologies were announced in their stead. An elaborate report "on the motions and sounds of the heart" was *presented*, but not *read* to the section; the *results* from the experiments were given, the most remarkable of which are as follows:—

Motions.—That the normal pulsation appears to be caused mainly by the undulatory and excentric resistance to muscular compression, excited by the blood in systole, and to be in no degree attributable to any blow, stroke, or other form of impulse implying locomotion. This cardiac impulse is evident in the exposed heart.

That the arterial diastole, or pulse, almost everywhere outside the pericardium, perceptibly succeeds to the cardiac systole. Though near the heart the interval is very brief, and to unpractised observers may be very difficult to distinguish.

Sounds.—That the first sound depends partly, but in a slight degree, on the abrupt closure and transitory tension of the auriculo ventricular valves, which give to this sound its sharp, well-defined beginning; but that the first sound is mainly attributable to *cardiac muscular tension alone*, and that its prolonged duration is probably owing to the progressive character of the normal systolic effort from fundus to apex; and that this sound is, probably, in no degree, attributable to any blow or stroke against the ribs.

That the auricular systole is attended by an intrinsic sound, resembling that of the ventricles, but more short, obtuse, and feeble.

That in pericarditis we may find the friction sound to be, when well marked, double, or even quadruple, that is, double with the ventricles and double with the auricles.

That, independent of structural defect, the normal sounds of the heart are liable to modifications by merely dynamic or functional affections of the carneæ columnæ and other contractile parts governing the action of the valves; and these affections may arise from humoral defect, from hæmorrhage, or the introduction of a poison into the veins.

That the suction influence on the venous circulation, attributed to respiration, is well-founded.

That the action of long muscles, as those of the abdomen, is accompanied by an intrinsic sound.

A very brief observation or two were made by Sir Charles Bell and another member, on the subject of Hunter's opinion on the cause of the heart's impulse, and the subject was dropped. The voluminous Report will, of course, be published in the next Volume of the Association.

Professor Jeffry read a brief communication "on the use of the conglobate glands;" the principal object of which was to prove that those glands, by their dilatation and elasticity, serve the purpose of "little hearts," to propel the contents of the lymphatic vessels to the thoracic duct, which is emptied of *its* contents by the dilatation of the right ventricle of the "great heart" acting on the right auricle and venous system. He denied the power of capillary attraction, and the valves of these vessels to effect the circulation of their fluids; and he denied the muscularity of their coats altogether. These opinions Dr. Jeffry had promulgated in his lectures for more than twenty years.

CHEMISTRY AND PHYSIOLOGY OF DIGESTION.

We are happy to inform our readers that "a committee, consisting of Professor T. Thomson, Dr. Prout, Professor Owen, Professor T. Graham, and Dr. R. D. Thomson, has been appointed, with a grant of £200, to make a series of experiments on the chemistry and physiology of digestion," and to bring over from America, Alexis St. Martin, the individual mentioned by Dr. Beaumont, in whose stomach a perforation exists.

TO CORRESPONDENTS.

From press of matter, we regret to be unable to insert the communications of several correspondents this week; and amongst others the note of Mr. Lucas with its reply.